


**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐

|   |                  |                    |  |   |                           |   |                            |                                       |              |              |               |                 |  |
|---|------------------|--------------------|--|---|---------------------------|---|----------------------------|---------------------------------------|--------------|--------------|---------------|-----------------|--|
| <b>APPLICATION FOR PERMIT TO DRILL</b>  |                  |                    |  |   |                           | <b>1. WELL NAME and NUMBER</b><br>BONANZA 1023-5I1CS  |                            |                                       |              |              |               |                 |  |
| <b>2. TYPE OF WORK</b><br>DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/> |                  |                    |  |   |                           | <b>3. FIELD OR WILDCAT</b><br>NATURAL BUTTES  |                            |                                       |              |              |               |                 |  |
| <b>4. TYPE OF WELL</b><br>Gas Well <input type="checkbox"/> Coalbed Methane Well: NO <input type="checkbox"/>   |                  |                    |  |   |                           | <b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b>  |                            |                                       |              |              |               |                 |  |
| <b>6. NAME OF OPERATOR</b><br>KERR-MCGEE OIL & GAS ONSHORE, L.P.  |                  |                    |  |   |                           | <b>7. OPERATOR PHONE</b><br>720 929-6515  |                            |                                       |              |              |               |                 |  |
| <b>8. ADDRESS OF OPERATOR</b><br>P.O. Box 173779, Denver, CO, 80217   |                  |                    |  |   |                           | <b>9. OPERATOR E-MAIL</b><br>julie.jacobson@anadarko.com  |                            |                                       |              |              |               |                 |  |
| <b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b><br>UTU33433   |                  |                    | <b>11. MINERAL OWNERSHIP</b><br>FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>    |   |                           | <b>12. SURFACE OWNERSHIP</b><br>FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/> |                            |                                       |              |              |               |                 |  |
| <b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>  |                  |                    |  |   |                           | <b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>  |                            |                                       |              |              |               |                 |  |
| <b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>   |                  |                    |  |   |                           | <b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>   |                            |                                       |              |              |               |                 |  |
| <b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>   |                  |                    | <b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b><br>YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/> |   |                           | <b>19. SLANT</b><br>VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>                               |                            |                                       |              |              |               |                 |  |
| <b>20. LOCATION OF WELL</b>   |                  | <b>FOOTAGES</b>    |  | <b>QTR-QTR</b>  |                           | <b>SECTION</b>  |                            | <b>TOWNSHIP</b>                       |              | <b>RANGE</b> |               | <b>MERIDIAN</b> |  |
| <b>LOCATION AT SURFACE</b>  |                  | 1634 FSL 1030 FEL  |  | NESE  |                           | 5   |                            | 10.0 S                                |              | 23.0 E       |               | S               |  |
| <b>Top of Uppermost Producing Zone</b>  |                  | 2141 FSL 460 FEL   |  | NESE  |                           | 5   |                            | 10.0 S                                |              | 23.0 E       |               | S               |  |
| <b>At Total Depth</b>   |                  | 2141 FSL 460 FEL   |  | NESE  |                           | 5   |                            | 10.0 S                                |              | 23.0 E       |               | S               |  |
| <b>21. COUNTY</b><br>UINTAH   |                  |                    | <b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b><br>2141   |   |                           | <b>23. NUMBER OF ACRES IN DRILLING UNIT</b><br>1923   |                            |                                       |              |              |               |                 |  |
|   |                  |                    | <b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b><br>747  |   |                           | <b>26. PROPOSED DEPTH</b><br>MD: 8486 TVD: 8370   |                            |                                       |              |              |               |                 |  |
| <b>27. ELEVATION - GROUND LEVEL</b><br>5299   |                  |                    | <b>28. BOND NUMBER</b><br>WYB000291  |   |                           | <b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b><br>43-8496   |                            |                                       |              |              |               |                 |  |
| <b>Hole, Casing, and Cement Information</b>   |                  |                    |  |   |                           |   |                            |                                       |              |              |               |                 |  |
| <b>String</b>   | <b>Hole Size</b> | <b>Casing Size</b> | <b>Length</b>  | <b>Weight</b>   | <b>Grade &amp; Thread</b> | <b>Max Mud Wt.</b>  | <b>Cement</b>              |                                       | <b>Sacks</b> | <b>Yield</b> | <b>Weight</b> |                 |  |
| <b>Surf</b>   | 11               | 8.625              | 0 - 2280   | 28.0  | J-55 LT&C                 | 0.2   | Type V                     |                                       | 180          | 1.15         | 15.8          |                 |  |
|   |                  |                    |  |   |                           |   | Class G                    |                                       | 270          | 1.15         | 15.8          |                 |  |
| <b>Prod</b>   | 7.875            | 4.5                | 0 - 8486   | 11.6  | I-80 LT&C                 | 12.5  | Premium Lite High Strength |                                       | 270          | 3.38         | 11.0          |                 |  |
|   |                  |                    |  |   |                           |   | 50/50 Poz                  |                                       | 1140         | 1.31         | 14.3          |                 |  |
| <b>ATTACHMENTS</b>  |                  |                    |  |   |                           |   |                            |                                       |              |              |               |                 |  |
| <b>VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES</b>   |                  |                    |  |   |                           |   |                            |                                       |              |              |               |                 |  |
| <input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER  |                  |                    |  |   |                           | <input checked="" type="checkbox"/> COMPLETE DRILLING PLAN  |                            |                                       |              |              |               |                 |  |
| <input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)  |                  |                    |  |   |                           | <input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER  |                            |                                       |              |              |               |                 |  |
| <input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)  |                  |                    |  |   |                           | <input checked="" type="checkbox"/> TOPOGRAPHICAL MAP   |                            |                                       |              |              |               |                 |  |
| <b>NAME</b> Gina Becker   |                  |                    |  | <b>TITLE</b> Regulatory Analyst II  |                           |   |                            | <b>PHONE</b> 720 929-6086             |              |              |               |                 |  |
| <b>SIGNATURE</b>  |                  |                    |  | <b>DATE</b> 10/17/2011  |                           |   |                            | <b>EMAIL</b> gina.becker@anadarko.com |              |              |               |                 |  |
| <b>API NUMBER ASSIGNED</b><br>43047520600000  |                  |                    |  | <b>APPROVAL</b><br><br>Permit Manager |                           |   |                            |                                       |              |              |               |                 |  |

RECEIVED: October 26, 2011

**Kerr-McGee Oil & Gas Onshore. L.P.****BONANZA 1023-5I1CS**

Surface: 1634 FSL / 1030 FEL NESE

BHL: 2141 FSL / 460 FEL NESE

Section 5 T10S R23E

Uintah County, Utah  
Mineral Lease: UTU-33433**ONSHORE ORDER NO. 1****DRILLING PROGRAM**

1. & 2. **Estimated Tops of Important Geologic Markers:**  
**Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

| <u>Formation</u> | <u>Depth</u> | <u>Resource</u> |
|------------------|--------------|-----------------|
| Uinta            | 0 - Surface  |                 |
| Green River      | 1226         |                 |
| Birds Nest       | 1469         | Water           |
| Mahogany         | 1831         | Water           |
| Wasatch          | 4185         | Gas             |
| Mesaverde        | 6201         | Gas             |
| MVU2             | 7197         | Gas             |
| MVL1             | 7724         | Gas             |
| TVD              | 8370         |                 |
| TD               | 8486         |                 |

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Drilling Program

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

**7. Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 8370' TVD, approximately equals  

$$\frac{5,357 \text{ psi}}{0.64 \text{ psi/ft}} = \text{actual bottomhole gradient}$$

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Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,504 psi (bottom hole pressure  
 minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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Per Onshore Order No. 2 - Max Anticipated Surf. Press. (MASP) = (Pore Pressure at next csg point -  
 (0.22 psi/ft-partial evac gradient x TVD of next csg point))

**8. Anticipated Starting Dates:**

Drilling is planned to commence immediately upon approval of this application.

**9. Variances:**

Please refer to the attached Drilling Program.  
 Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

**Background**

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

#### **Variance for BOPE Requirements**

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

#### **Variance for Mud Material Requirements**

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

#### **Variance for Special Drilling Operation (surface equipment placement) Requirements**

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and



on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

**Variance for FIT Requirements**

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

**Conclusion**

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

**10. Other Information:**

Please refer to the attached Drilling Program.

|                   |   |           |            |             |             |                    |           |
|-------------------|---|-----------|------------|-------------|-------------|--------------------|-----------|
| COMPANY NAME      | KERR-McGEE OIL & GAS ONSHORE LP   |           |            |             | DATE        | October 14, 2011   |           |
| WELL NAME         | <b>BONANZA 1023-511CS</b>   |           |            |             | TD          | 8,370'             | 8,486' MD |
| FIELD             | Natural Buttes  | COUNTY    | Uintah     | STATE       | Utah        | FINISHED ELEVATION | 5299.3    |
| SURFACE LOCATION  | NESE  | 1634 FSL  | 1030 FEL   | Sec 5       | T 10S R 23E |                    |           |
|                   | Latitude:   | 39.975207 | Longitude: | -109.345003 | NAD 83      |                    |           |
| BTM HOLE LOCATION | NESE  | 2141 FSL  | 460 FEL    | Sec 5       | T 10S R 23E |                    |           |
|                   | Latitude:   | 39.976603 | Longitude: | -109.342966 | NAD 83      |                    |           |
| OBJECTIVE ZONE(S) | Wasatch/Mesaverde   |           |            |             |             |                    |           |
| ADDITIONAL INFO   | Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept. |           |            |             |             |                    |           |



**RECEIVED: October 17, 2011**



## KERR-McGEE OIL & GAS ONSHORE LP

### DRILLING PROGRAM

**CASING PROGRAM**

|            | SIZE   | INTERVAL        | WT.   | GR.   | CPLG. | DESIGN FACTORS |          |         |         |
|------------|--------|-----------------|-------|-------|-------|----------------|----------|---------|---------|
|            |        |                 |       |       |       | LTC            |          | DQX     |         |
| CONDUCTOR  | 14"    | 0-40'           |       |       |       | BURST          | COLLAPSE | TENSION |         |
|            |        |                 |       |       |       | 3,390          | 1,880    | 348,000 | N/A     |
| SURFACE    | 8-5/8" | 0 to 2,280      | 28.00 | IJ-55 | LTC   | 2.37           | 1.76     | 6.22    | N/A     |
|            |        |                 |       |       |       | 7,780          | 6,350    | 223,000 | 267,035 |
| PRODUCTION | 4-1/2" | 0 to 5,000      | 11.60 | I-80  | DQX   | 1.11           | 1.17     |         | 3.35    |
|            | 4-1/2" | 5,000 to 8,486' | 11.60 | I-80  | LTC   | 1.11           | 1.17     | 6.82    |         |

**Surface Casing:**

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe  
 Fracture at surface shoe with 0.1 psi/ft gas gradient above  
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoys.Fact. of water)

**Production casing:**

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient  
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoys.Fact. of water)

**CEMENT PROGRAM**

|            |                      | FT. OF FILL  | DESCRIPTION                            | SACKS   | EXCESS | WEIGHT | YIELD |
|------------|----------------------|--|--|---------|--------|--------|-------|
| SURFACE    | LEAD                 | 500'   | Premium cmt + 2% CaCl                  | 180     | 60%    | 15.80  | 1.15  |
| Option 1   |                      |  | + 0.25 pps flocele                     |         |        |        |       |
|            | TOP OUT CMT (6 jobs) | 1,200'   | 20 gals sodium silicate + Premium cmt  | 270     | 0%     | 15.80  | 1.15  |
|            |                      |  | + 2% CaCl + 0.25 pps flocele           |         |        |        |       |
| SURFACE    |                      | NOTE: If well will circulate water to surface, option 2 will be utilized |  |         |        |        |       |
| Option 2   | LEAD                 | 1,780'   | 65/35 Poz + 6% Gel + 10 pps gilsonite  | 160     | 35%    | 11.00  | 3.82  |
|            |                      |  | + 0.25 pps Flocele + 3% salt BWOW      |         |        |        |       |
|            | TAIL                 | 500'   | Premium cmt + 2% CaCl                  | 150     | 35%    | 15.80  | 1.15  |
|            |                      |  | + 0.25 pps flocele                     |         |        |        |       |
|            | TOP OUT CMT          | as required  | Premium cmt + 2% CaCl                  | as req. |        | 15.80  | 1.15  |
| PRODUCTION | LEAD                 | 3,676'   | Premium Lite II +0.25 pps              | 270     | 20%    | 11.00  | 3.38  |
|            |                      |  | celloflake + 5 pps gilsonite + 10% gel |         |        |        |       |
|            |                      |  | + 0.5% extender                        |         |        |        |       |
|            | TAIL                 | 4,810'   | 50/50 Poz/G + 10% salt + 2% gel        | 1,140   | 35%    | 14.30  | 1.31  |
|            |                      |  | + 0.1% R-3                             |         |        |        |       |

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

**FLOAT EQUIPMENT & CENTRALIZERS**

|            |  |
|------------|--|
| SURFACE    | Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe |
|            |  |
| PRODUCTION | Float shoe, 1 jt, float collar. No centralizers will be used.  |
|            |  |

**ADDITIONAL INFORMATION**

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

**DRILLING ENGINEER:**

Nick Spence / Danny Showers / Chad Loesel

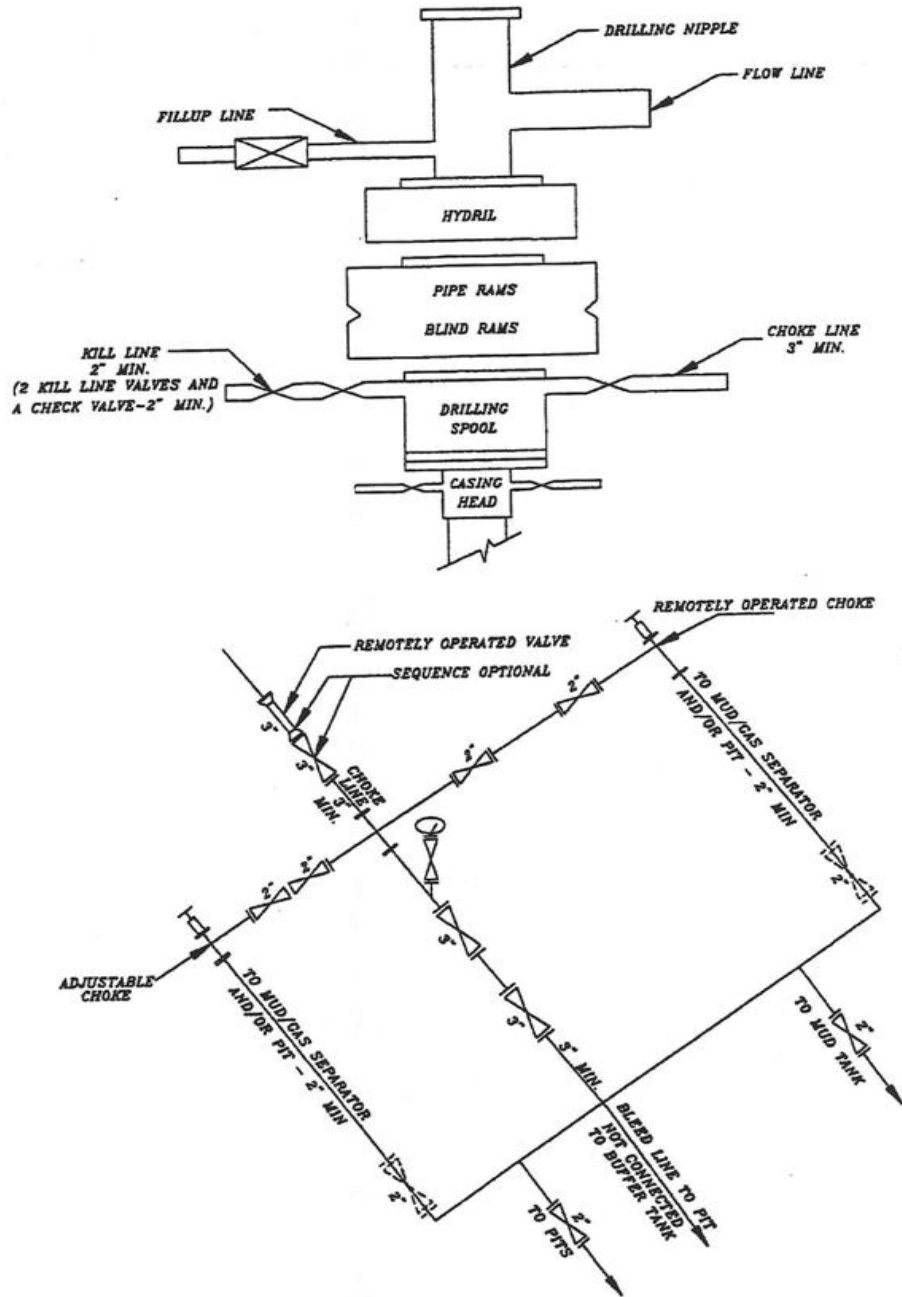
DATE: \_\_\_\_\_

**DRILLING SUPERINTENDENT:**

Kenny Gathings / Lovel Young

DATE: \_\_\_\_\_

EXHIBIT A  
BONANZA 1023-5I1CS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

Found 1977  
Brass Cap

N00°02"W - 40.04 (G.L.O.)  
N00°06'19"W - 2641.93' (Mean)

LOT 1

NAD 83 LATITUDE = 39.975207° (39° 58' 30.745")  
 LONGITUDE = 109.345003° (109° 20' 42.009")  
 NAD 27 LATITUDE = 39.975241° (39° 58' 30.868")  
 LONGITUDE = 109.344324° (109° 20' 39.566")

NAD 83 LATITUDE = 39.976603° (39° 58' 35.770")  
 LONGITUDE = 109.342966° (109° 20' 34.679")  
 NAD 27 LATITUDE = 39.976637° (39° 58' 35.893")  
 LONGITUDE = 109.342288° (109° 20' 32.237")

20.24 (G.L.O)

02'39"E - 2651.50' (Meas.)  
N00°07'E - 40.17 (G.L.O.)

Found 1995  
Aluminum Cap

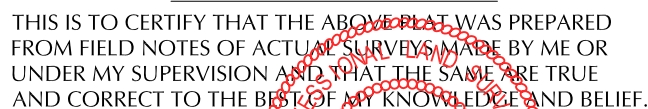
N00°00'38"W (Basis of Bearings)  
2638.25' (Measured)  
N00°04'E - 39.97 (G.L.O.)

Found 1995  
Aluminum Cap in  
Pile of Stones

Found 1995  
Aluminum Cap in  
Pile of Stones

S89°43'23"W - 2598.59' (Meas.)  
S89°48'W - 39.37 (G.L.O.)

**2141' FSL, 460' FEL (Bottom Hole)**  
**NE  $\frac{1}{4}$  SE  $\frac{1}{4}$  OF SECTION 5, T10S, R23E,**  
**S.L.B.&M., UINTAH COUNTY, UTAH.**



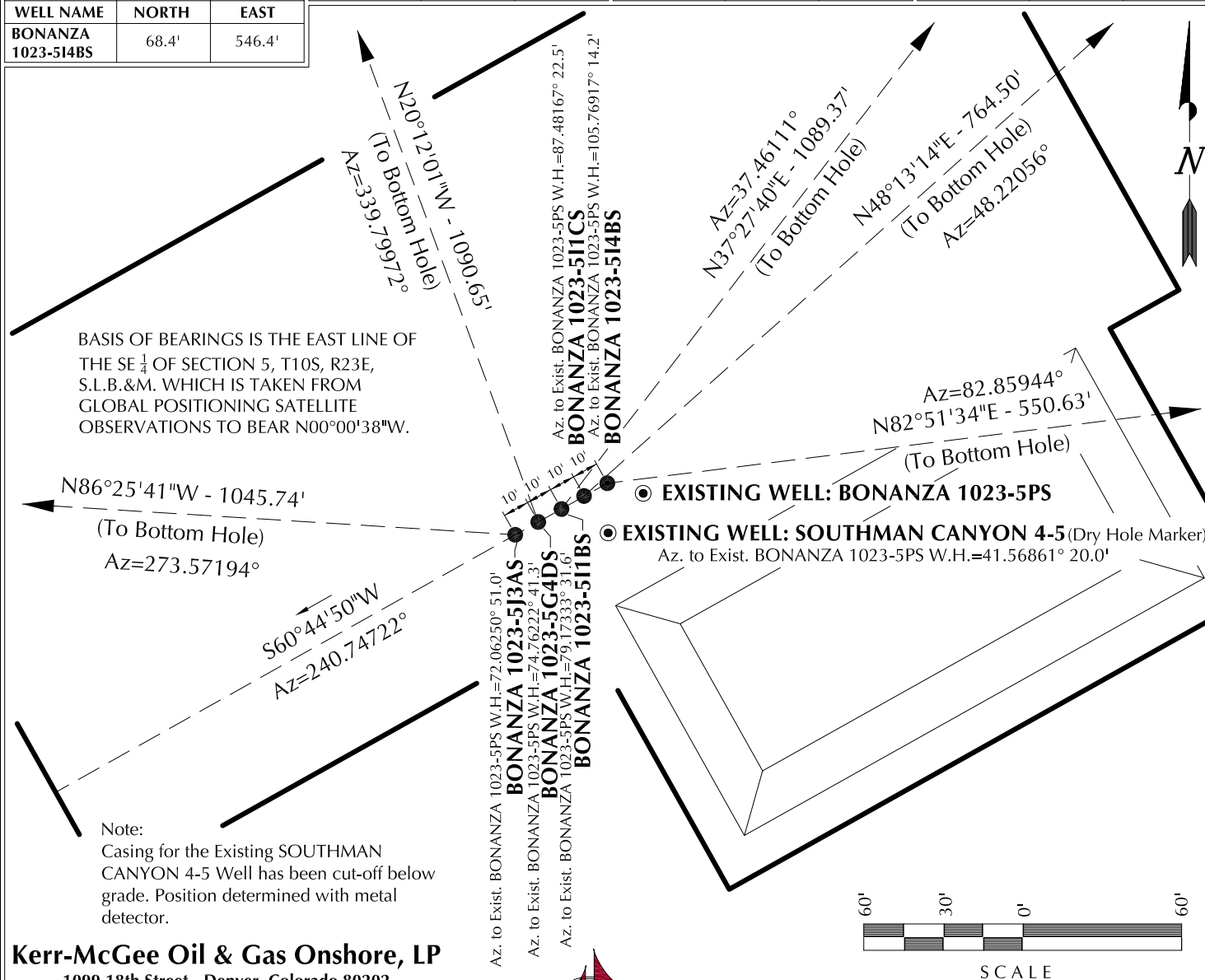
PROFESSIONAL LAND SURVEYOR  
REGISTRATION No. 6028691  
STATE OF UTAH

|                            |                     |  |
|----------------------------|---------------------|--|
| DATE SURVEYED:<br>03-09-10 | SURVEYED BY: M.S.B. | SHEET NO:<br><br><b>4</b><br><br>4 OF 19 |
| DATE DRAWN:<br>03-10-10    | DRAWN BY: E.M.S.    |  |
| SCALE: 1" = 1000'          | Date Last Revised:  |  |

| WELL NAME           | SURFACE POSITION |                |               |                |           | BOTTOM HOLE   |                |               |                |           |
|---------------------|------------------|----------------|---------------|----------------|-----------|---------------|----------------|---------------|----------------|-----------|
|                     | NAD83            |                | NAD27         |                | FOOTAGES  | NAD83         |                | NAD27         |                | FOOTAGES  |
|                     | LATITUDE         | LONGITUDE      | LATITUDE      | LONGITUDE      |           | LATITUDE      | LONGITUDE      | LATITUDE      | LONGITUDE      |           |
| BONANZA 1023-5J3AS  | 39°58'30.600"    | 109°20'42.345" | 39°58'30.723" | 109°20'39.902" | 1620' FSL | 39°58'31.257" | 109°20'55.747" | 39°58'31.380" | 109°20'53.303" | 1690' FSL |
| BONANZA 1023-5G4DS  | 39°58'30.648"    | 109°20'42.233" | 39°58'30.771" | 109°20'39.790" | 1625' FSL | 39°58'40.766" | 109°20'47.052" | 39°58'40.888" | 109°20'44.608" | 2643' FNL |
| BONANZA 1023-5I1BS  | 39°58'30.697"    | 109°20'42.119" | 39°58'30.819" | 109°20'39.676" | 1629' FSL | 39°58'39.231" | 109°20'33.595" | 39°58'39.354" | 109°20'31.153" | 2491' FSL |
| BONANZA 1023-5I1CS  | 39°58'30.745"    | 109°20'42.009" | 39°58'30.868" | 109°20'39.566" | 1634' FSL | 39°58'35.770" | 109°20'34.679" | 39°58'35.893" | 109°20'32.237" | 2141' FSL |
| BONANZA 1023-5I4BS  | 39°58'30.793"    | 109°20'41.896" | 39°58'30.916" | 109°20'39.453" | 1639' FSL | 39°58'31.462" | 109°20'34.878" | 39°58'31.585" | 109°20'32.436" | 1705' FSL |
| BONANZA 1023-5PS    | 39°58'30.755"    | 109°20'41.721" | 39°58'30.877" | 109°20'39.278" | 1635' FSL | 39°58'31.462" | 109°20'34.878" | 39°58'31.585" | 109°20'32.436" | 1705' FSL |
| SOUTHMAN CANYON 4-5 | 39°58'30.607"    | 109°20'41.892" | 39°58'30.729" | 109°20'39.449" | 1620' FSL | 39°58'31.462" | 109°20'34.878" | 39°58'31.585" | 109°20'32.436" | 1705' FSL |
|                     | 39°58'30.607"    | 109°20'41.892" | 39°58'30.729" | 109°20'39.449" | 1620' FSL | 39°58'31.462" | 109°20'34.878" | 39°58'31.585" | 109°20'32.436" | 1705' FSL |

## RELATIVE COORDINATES - From Surface Position to Bottom Hole

| WELL NAME          | NORTH | EAST     | WELL NAME          | NORTH   | EAST    | WELL NAME          | NORTH  | EAST   | WELL NAME          | NORTH  | EAST   |
|--------------------|-------|----------|--------------------|---------|---------|--------------------|--------|--------|--------------------|--------|--------|
| BONANZA 1023-5J3AS | 65.2' | -1043.7' | BONANZA 1023-5G4DS | 1023.6' | -376.6' | BONANZA 1023-5I1BS | 864.7' | 662.6' | BONANZA 1023-5I1CS | 509.4' | 570.1' |
| BONANZA 1023-5I4BS | 68.4' | 546.4'   |                    |         |         |                    |        |        |                    |        |        |



**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - BONANZA 1023-5I**

**WELL PAD INTERFERENCE PLAT**  
WELLS - BONANZA 1023-5J3AS,  
BONANZA 1023-5G4DS, BONANZA 1023-5I1BS,  
BONANZA 1023-5I1CS & BONANZA 1023-5I4BS  
LOCATED IN SECTION 5, T10S, R23E,  
S.L.B.&M., UTAH COUNTY, UTAH.



**609 CONSULTING, LLC**  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

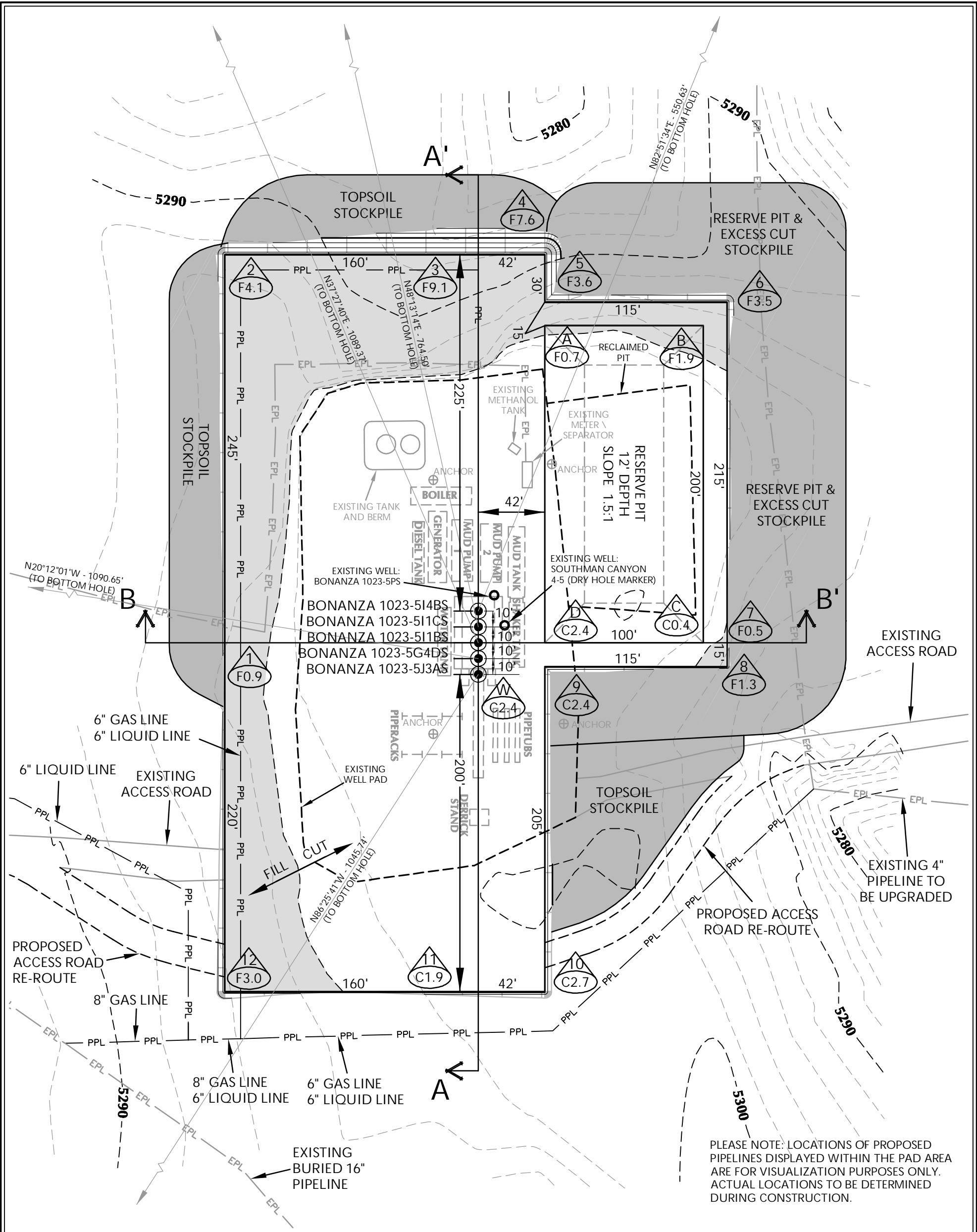
**TIMBERLINE**

(435) 789-1365

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209 NORTH 300 WEST - VERNAL, UTAH 84078

|                            |                     |                                  |
|----------------------------|---------------------|----------------------------------|
| DATE SURVEYED:<br>03-09-10 | SURVEYED BY: M.S.B. | SHEET NO:<br><b>6</b><br>6 OF 17 |
| DATE DRAWN:<br>03-10-10    | DRAWN BY: E.M.S.    |                                  |
| SCALE: 1" = 60'            | Date Last Revised:  |                                  |





PLEASE NOTE: LOCATIONS OF PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

WELL PAD - BONANZA 1023-5I DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5299.2'  
FINISHED GRADE ELEVATION = 5296.8'  
CUT SLOPES = 1.5:1  
FILL SLOPES = 1.5:1  
TOTAL WELL PAD AREA = 2.92 ACRES  
TOTAL DAMAGE AREA = 5.89 ACRES  
SHRINKAGE FACTOR = 1.10  
SWELL FACTOR = 1.00

Kerr-McGee Oil & Gas Onshore, LP  
1099 18th Street - Denver, Colorado 80202

WELL PAD - BONANZA 1023-5I

WELL PAD - LOCATION LAYOUT  
BONANZA 1023-5J3AS,  
BONANZA 1023-5G4DS, BONANZA 1023-5I1BS,  
BONANZA 1023-5I1CS & BONANZA 1023-5I4BS  
LOCATED IN SECTION 5, T10S, R23E,  
S.L.B.&M., Uintah County, Utah.



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Sheridan, WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 5,476 C.Y.  
TOTAL FILL FOR WELL PAD = 5,134 C.Y.  
TOPSOIL @ 6" DEPTH = 1,448 C.Y.  
EXCESS MATERIAL = 342 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT  
+/- 6,680 CY  
RESERVE PIT CAPACITY (2' OF FREEBOARD)  
+/- 25,330 BARRELS

WELL PAD LEGEND

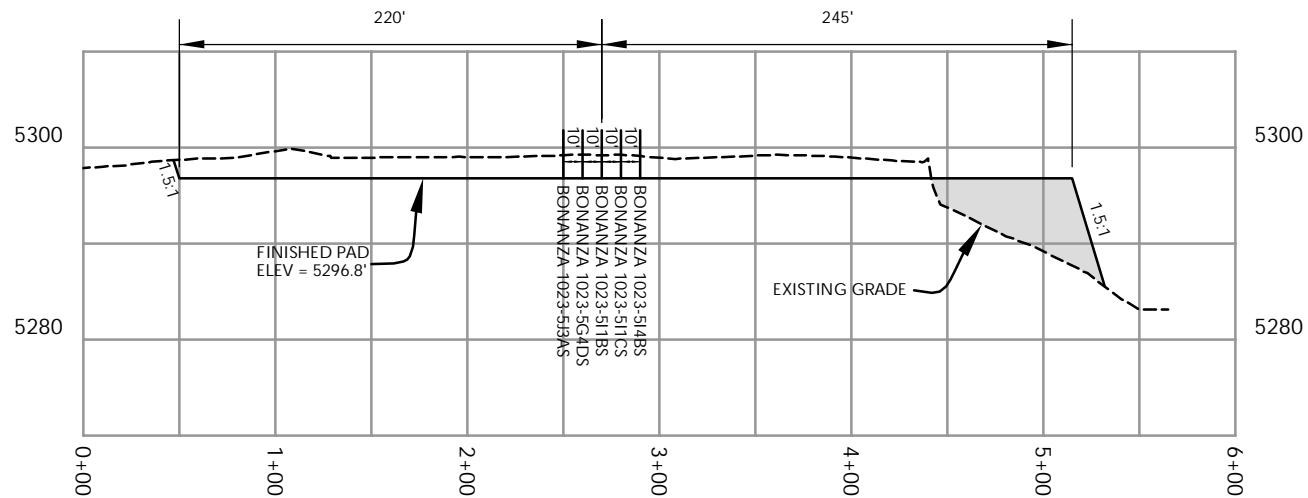
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL - PROPOSED PIPELINE
- EPL - EXISTING PIPELINE



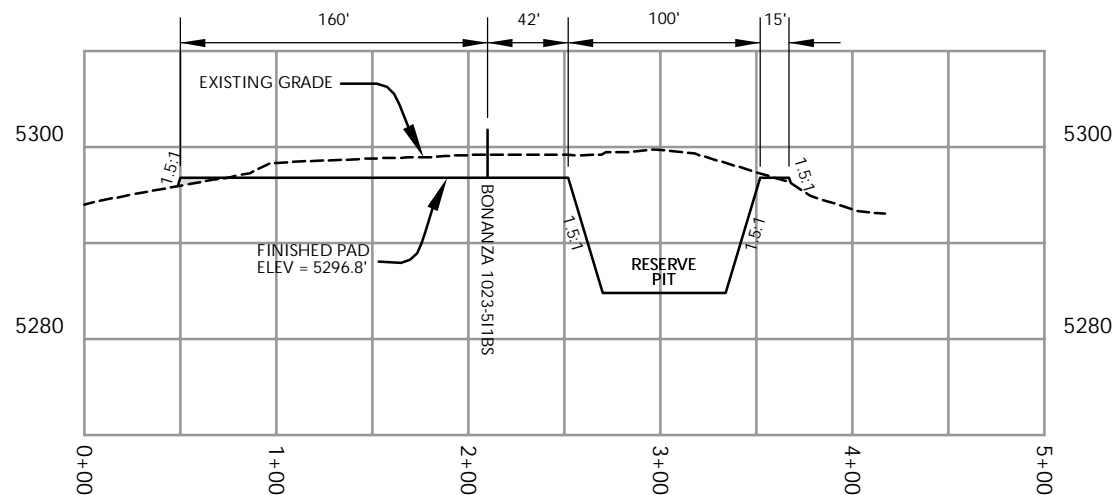
HORIZONTAL 0 30 60 1" = 60'  
2' CONTOURS

Scale: 1"=60' Date: 3/30/10 SHEET NO: 7  
REVISED: SEA 6/25/10 7 OF 17

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**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

NOTE: CROSS SECTION B-B' DEPICTS MAXIMUM RESERVE PIT DEPTH.

Kerr-McGee Oil & Gas Onshore, LP  
1099 18th Street - Denver, Colorado 80202

WELL PAD - BONANZA 1023-51

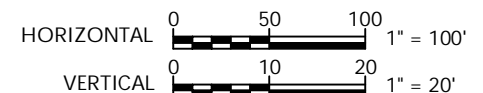
WELL PAD - CROSS SECTIONS  
BONANZA 1023-5J3AS,  
BONANZA 1023-5G4DS, BONANZA 1023-511BS,  
BONANZA 1023-511CS & BONANZA 1023-514BS  
LOCATED IN SECTION 5, T10S, R23E,  
S.L.B.&M., UINTAH COUNTY, UTAH.



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Sheridan, WY 82801  
Phone 307-674-0609  
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ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

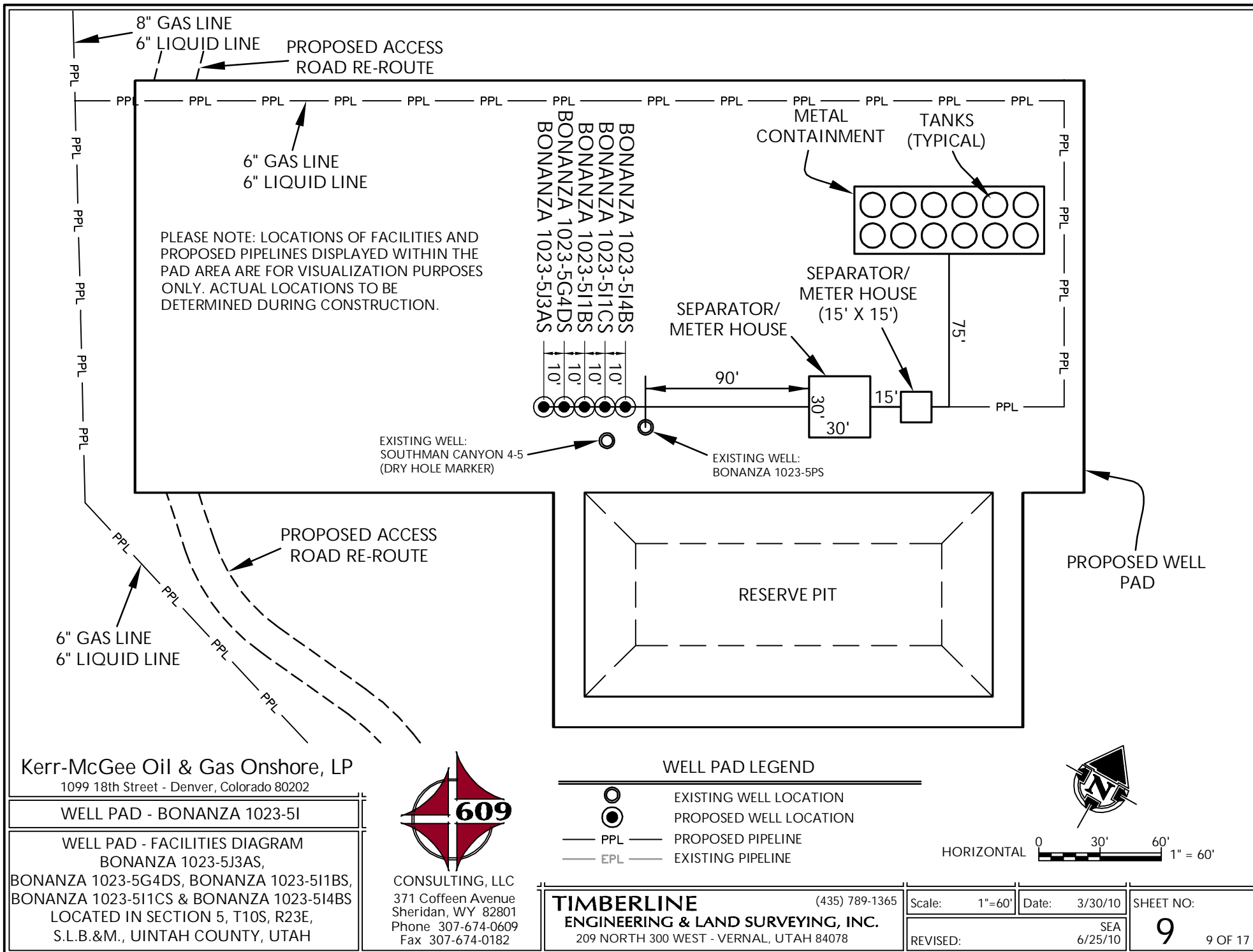
(435) 789-1365



|                |               |           |
|----------------|---------------|-----------|
| Scale: 1"=100' | Date: 3/30/10 | SHEET NO: |
| REVISED:       | SEA 6/25/10   | 8 8 OF 17 |

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 1099 18th Street - Denver, Colorado 80202

WELL PAD - BONANZA 1023-5I

WELL PAD - FACILITIES DIAGRAM  
 BONANZA 1023-5J3AS,  
 BONANZA 1023-5G4DS, BONANZA 1023-5I1BS,  
 BONANZA 1023-5I1CS & BONANZA 1023-5I4BS  
 LOCATED IN SECTION 5, T10S, R23E,  
 S.L.B.&M., UTAH COUNTY, UTAH



CONSULTING, LLC  
 371 Coffeen Avenue  
 Sheridan, WY 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

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Scale: 1" = 60'  
 REVISED:

Date: 3/30/10  
 SEA 6/25/10

SHEET NO:

9

9 OF 17

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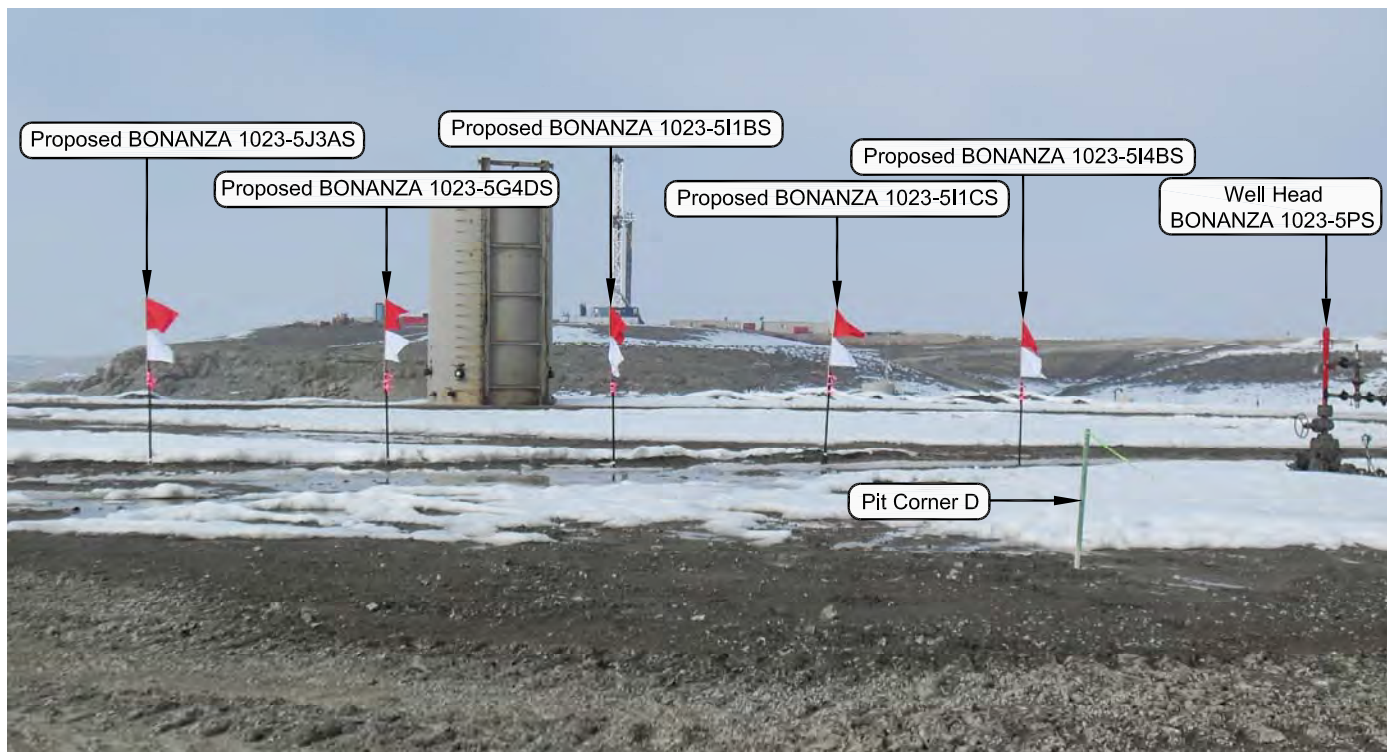


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKES

CAMERA ANGLE: NORTHWESTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: SOUTHERLY

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - BONANZA 1023-5I**

**LOCATION PHOTOS**  
**BONANZA 1023-5J3AS, BONANZA 1023-5G4DS,**  
**BONANZA 1023-5I1BS, BONANZA 1023-5I1CS &**  
**BONANZA 1023-5I4BS**  
**LOCATED IN SECTION 5, T10S, R23E,**  
**S.L.B.&M., UTAH COUNTY, UTAH.**



**CONSULTING, LLC**  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

**TIMBERLINE**

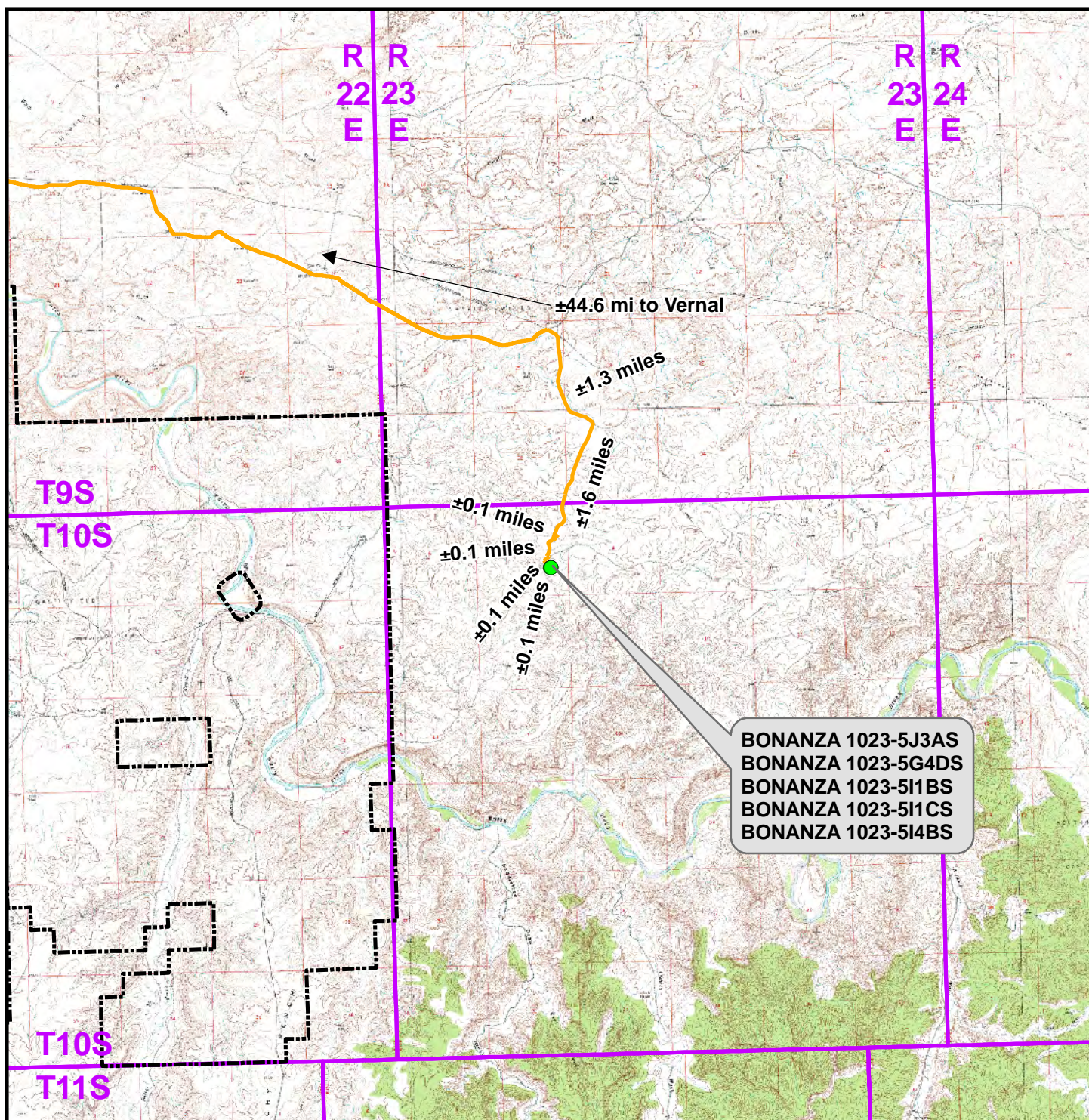
(435) 789-1365

**ENGINEERING & LAND SURVEYING, INC.**  
209 NORTH 300 WEST - VERNAL, UTAH 84078

|                                |                         |  |
|--------------------------------|-------------------------|--|
| DATE PHOTOS TAKEN:<br>03-09-10 | PHOTOS TAKEN BY: M.S.B. | SHEET NO:<br><br><b>10</b><br>10 OF 17 |
| DATE DRAWN:<br>03-10-10        | DRAWN BY: E.M.S.        |  |
| Date Last Revised:             |                         |  |

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### Legend

- Proposed Well Location
- Natural Buttes Unit Boundary
- Access Route - Proposed

Distance From Well Pad - BONANZA 1023-5I To Unit Boundary: ±9,070ft

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

### WELL PAD - BONANZA 1023-5I

#### TOPO A

BONANZA 1023-5J3AS, BONANZA 1023-5G4DS,  
BONANZA 1023-5I1BS, BONANZA 1023-5I1CS &  
BONANZA 1023-5I4BS

LOCATED IN SECTION 5, T10S, R23E  
S.L.B.&M., UTAH COUNTY, UTAH



**609 CONSULTING, LLC**  
371 Coffeen Avenue  
Sheridan, WY 82801  
Phone (307) 674-0609  
Fax (307) 674-0182



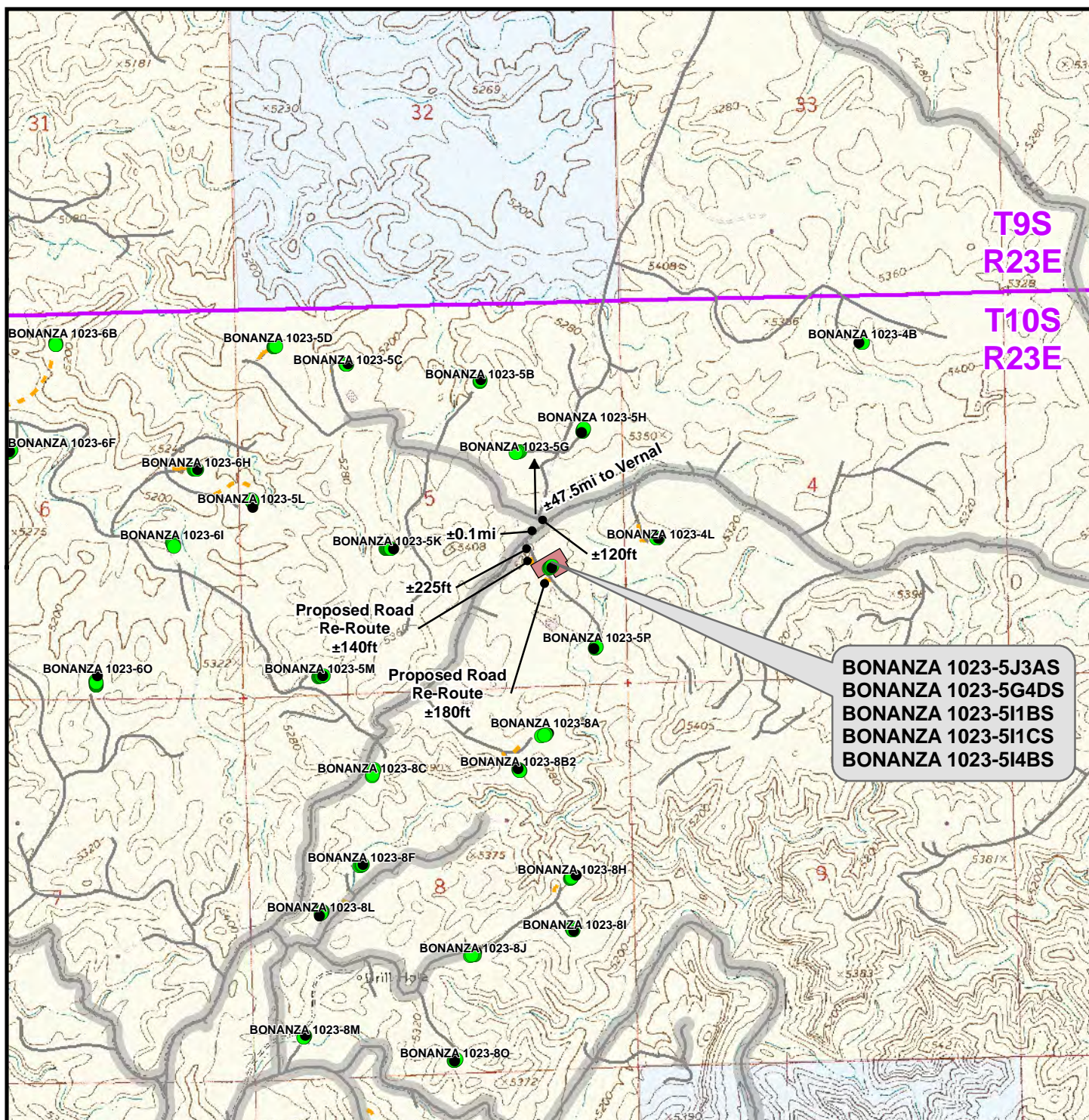
|                  |                    |
|------------------|--------------------|
| Scale: 1:100,000 | NAD83 USP Central  |
| Drawn: CPS       | Date: 30 Mar 2010  |
| Revised: TL      | Date: 25 June 2010 |

Sheet No:

**11** 11 of 17

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### Legend

- |                   |            |                       |               |                             |           |
|-------------------|------------|-----------------------|---------------|-----------------------------|-----------|
| ● Well - Proposed | ■ Well Pad | - - - Road - Proposed | ▬ County Road | ■ Bureau of Land Management | ■ State   |
| ● Well - Existing |            | ▬ Road - Existing     |               | ■ Indian Reservation        | ■ Private |

Total Proposed Road Re-Route Length: ±320ft

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

### WELL PAD - BONANZA 1023-51

#### TOPO B

BONANZA 1023-5J3AS, BONANZA 1023-5G4DS,  
BONANZA 1023-5I1BS, BONANZA 1023-5I1CS &  
BONANZA 1023-5I4BS  
LOCATED IN SECTION 5, T10S, R23E  
S.L.B.&M., UTAH COUNTY, UTAH



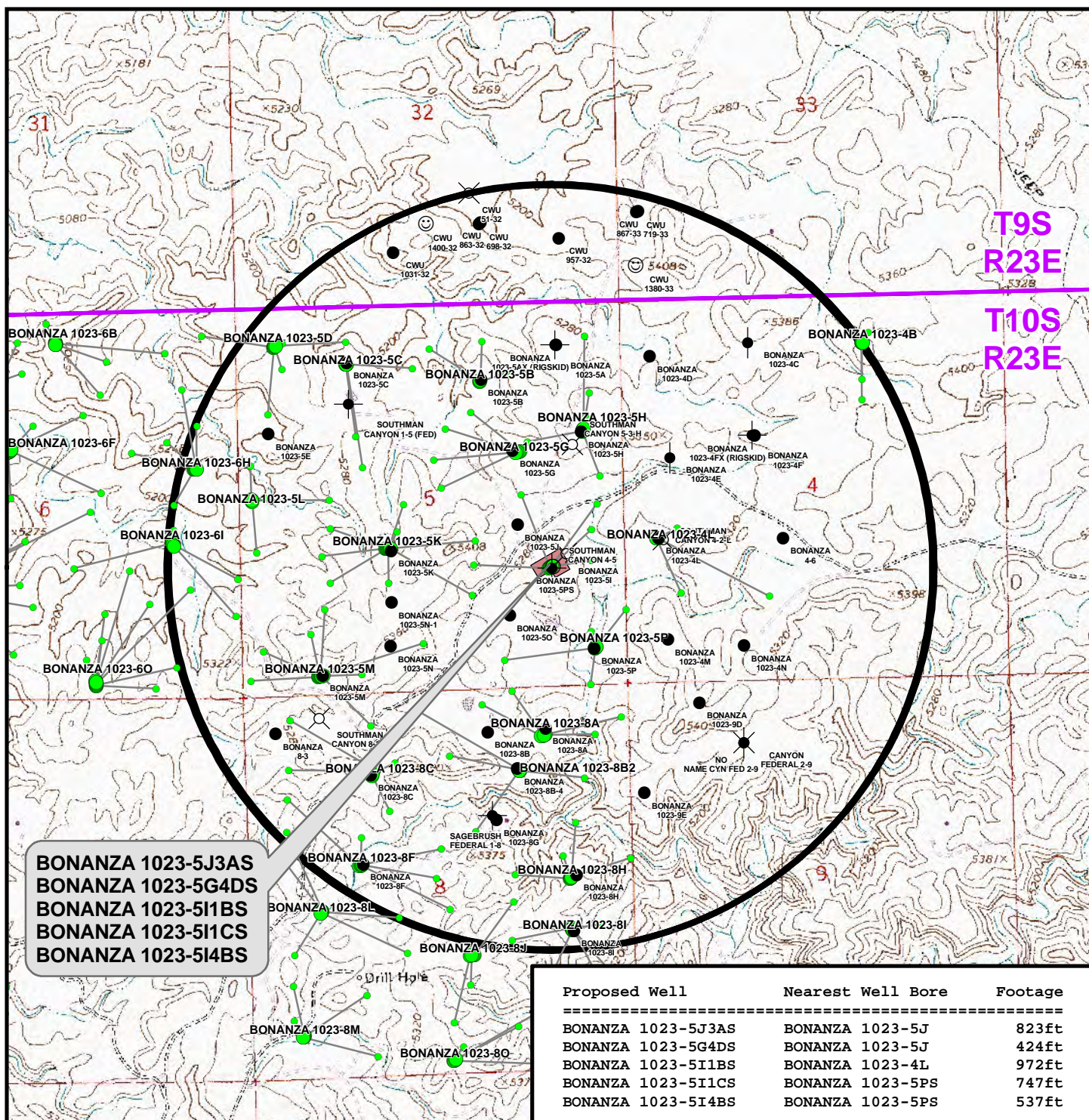
**CONSULTING, LLC**  
371 Coffeen Avenue  
Sheridan, WY 82801  
Phone (307) 674-0609  
Fax (307) 674-0182



|                     |                    |                    |
|---------------------|--------------------|--------------------|
| Scale: 1" = 2,000ft | NAD83 USP Central  | Sheet No:          |
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| Revised: TL         | Date: 25 June 2010 |                    |

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**Legend**

- Well - Proposed
- Bottom Hole - Proposed
- Well Path
- Well Pad
- Well - 1 Mile Radius

**Kerr-McGee Oil & Gas Onshore, LP**  
 1099 18th Street, Denver, Colorado 80202

**WELL PAD - BONANZA 1023-5I****TOPO C**

**BONANZA 1023-5J3AS, BONANZA 1023-5G4DS,  
 BONANZA 1023-5I1BS, BONANZA 1023-5I1CS &  
 BONANZA 1023-5I4BS**

**LOCATED IN SECTION 5, T10S, R23E  
 S.L.B.&M., UINTAH COUNTY, UTAH**



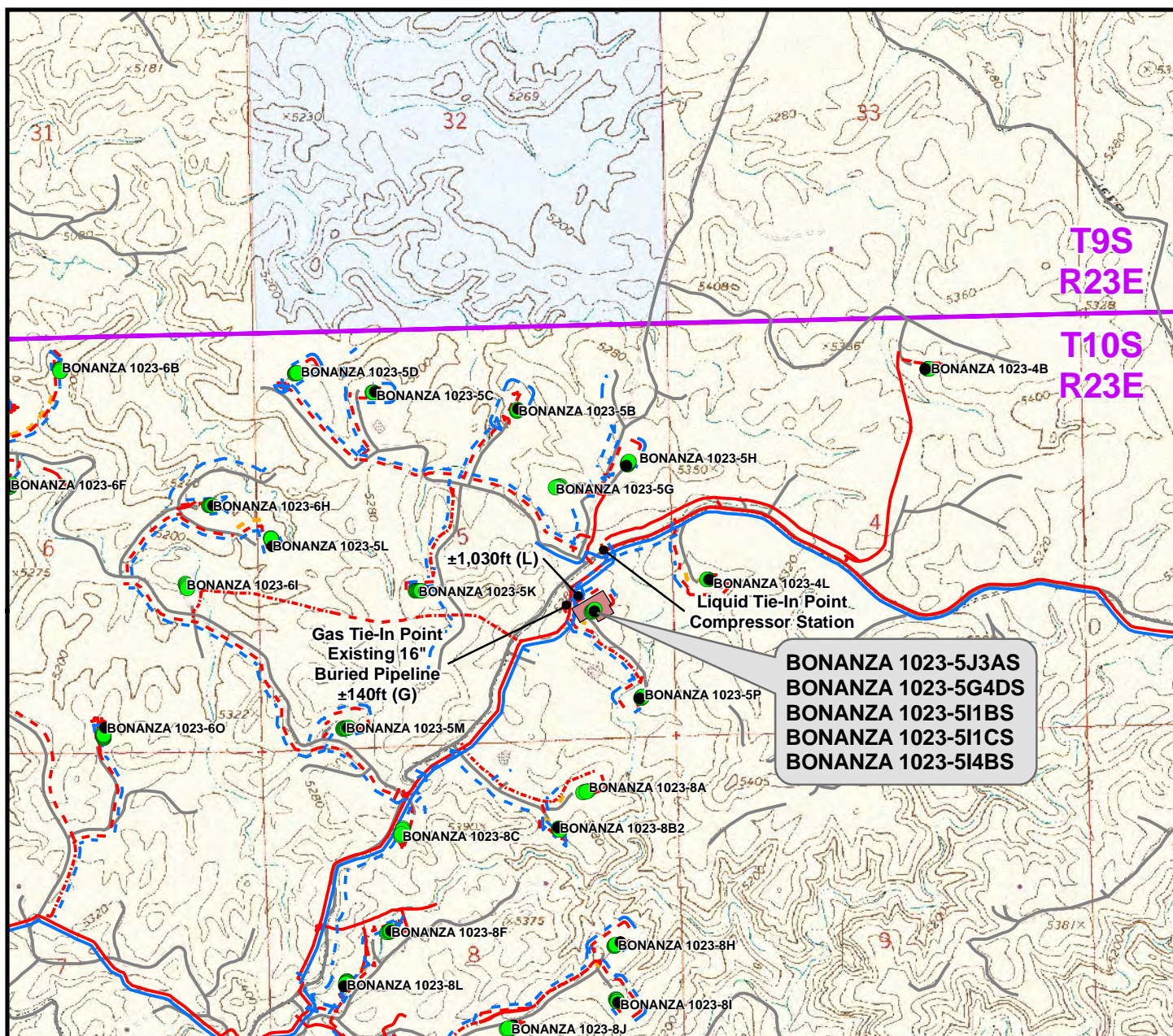
- Producing
- Temporarily-Abandoned
- Active
- Shut-In
- ☺ Spudded (Drilling commenced; Not yet completed)
- ▲ Approved permit (APD); not yet spudded
- New Permit (Not yet approved or drilled)
- ⊕ Inactive
- ⊗ Drilling Operations Suspended
- ⊗ Plugged and Abandoned
- ⊗ Location Abandoned
- ⊗ Dry hole marker, buried
- ⊗ Returned APD (Unapproved)

Scale: 1" = 2,000ft  
 NAD83 USP Central  
 Drawn: CPS  
 Revised: TL  
 Date: 30 Mar 2010  
 Date: 25 June 2010

Sheet No:

**13**  
 13 of 17





| Proposed Liquid Pipeline                        | Length   |
|---|----------|
| Proposed 6" (First Meter House to Edge of Pad)  | ±680ft   |
| Proposed 6" (Edge of Pad to Compressor Station) | ±1,030ft |

TOTAL PROPOSED LIQUID PIPELINE = ± 1,710ft

| Proposed Gas Pipeline  | Length |
|--|--------|
| Proposed 6" (First Meter House to Edge of Pad)                     | ±680ft |
| Proposed 6" (Edge of Pad to 1023-5P Intersection)                  | ±30ft  |
| Proposed 8" (1023-5P Intersection to Existing 16" Buried Pipeline) | ±110ft |

TOTAL PROPOSED GAS PIPELINE = ±820ft

### Legend

|                   |                                     |  |                       |                             |
|-------------------|-------------------------------------|--|-----------------------|-----------------------------|
| ● Well - Proposed | - - - Gas Pipeline - Proposed       | - - - Liquid Pipeline - Proposed       | - - - Road - Proposed | ■ Bureau of Land Management |
| ● Well - Existing | - - - Gas Pipeline - To Be Upgraded | - - - Liquid Pipeline - To Be Upgraded | - - - Road - Existing | ■ Indian Reservation        |
| ■ Well Pad        | - - - Gas Pipeline - Existing       | - - - Liquid Pipeline - Existing       |                       | ■ State                     |
|                   |                                     |  |                       | ■ Private                   |

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

### WELL PAD - BONANZA 1023-51

#### TOPO D

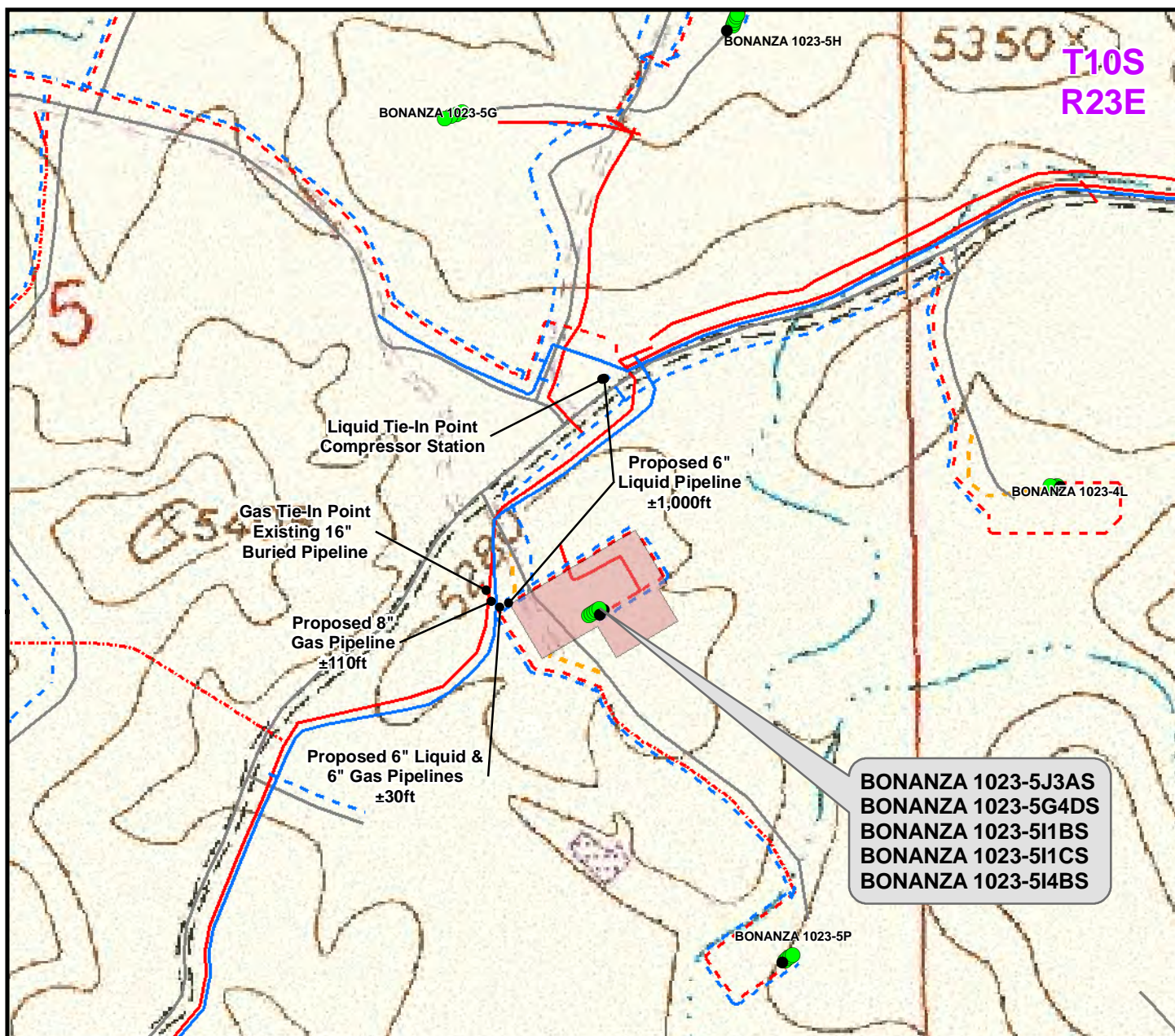
BONANZA 1023-5J3AS, BONANZA 1023-5G4DS,  
BONANZA 1023-5I1BS, BONANZA 1023-5I1CS &  
BONANZA 1023-5I4BS  
LOCATED IN SECTION 5, T10S, R23E  
S.L.B.&M., UTAH COUNTY, UTAH



|                     |                    |           |
|---------------------|--------------------|-----------|
| Scale: 1" = 2,000ft | NAD83 USP Central  | Sheet No: |
| Drawn: CPS          | Date: 30 Mar 2010  | <b>14</b> |
| Revised: TL         | Date: 25 June 2010 | 14 of 17  |

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| Proposed Liquid Pipeline                        | Length   |
|---|----------|
| Proposed 6" (First Meter House to Edge of Pad)  | ±680ft   |
| Proposed 6" (Edge of Pad to Compressor Station) | ±1,030ft |

TOTAL PROPOSED LIQUID PIPELINE = ± 1,710ft

| Proposed Gas Pipeline  | Length |
|--|--------|
| Proposed 6" (First Meter House to Edge of Pad)                     | ±680ft |
| Proposed 6" (Edge of Pad to 1023-5P Intersection)                  | ±30ft  |
| Proposed 8" (1023-5P Intersection to Existing 16" Buried Pipeline) | ±110ft |

TOTAL PROPOSED GAS PIPELINE = ±820ft

### Legend

|                   |                                     |  |                       |                             |
|-------------------|-------------------------------------|--|-----------------------|-----------------------------|
| ● Well - Proposed | - - - Gas Pipeline - Proposed       | - - - Liquid Pipeline - Proposed       | - - - Road - Proposed | ■ Bureau of Land Management |
| ● Well - Existing | - - - Gas Pipeline - To Be Upgraded | - - - Liquid Pipeline - To Be Upgraded | - - - Road - Existing | ■ Indian Reservation        |
| ■ Well Pad        | - - - Gas Pipeline - Existing       | - - - Liquid Pipeline - Existing       |                       | ■ State                     |
|                   |                                     |  |                       | ■ Private                   |

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

### WELL PAD - BONANZA 1023-51

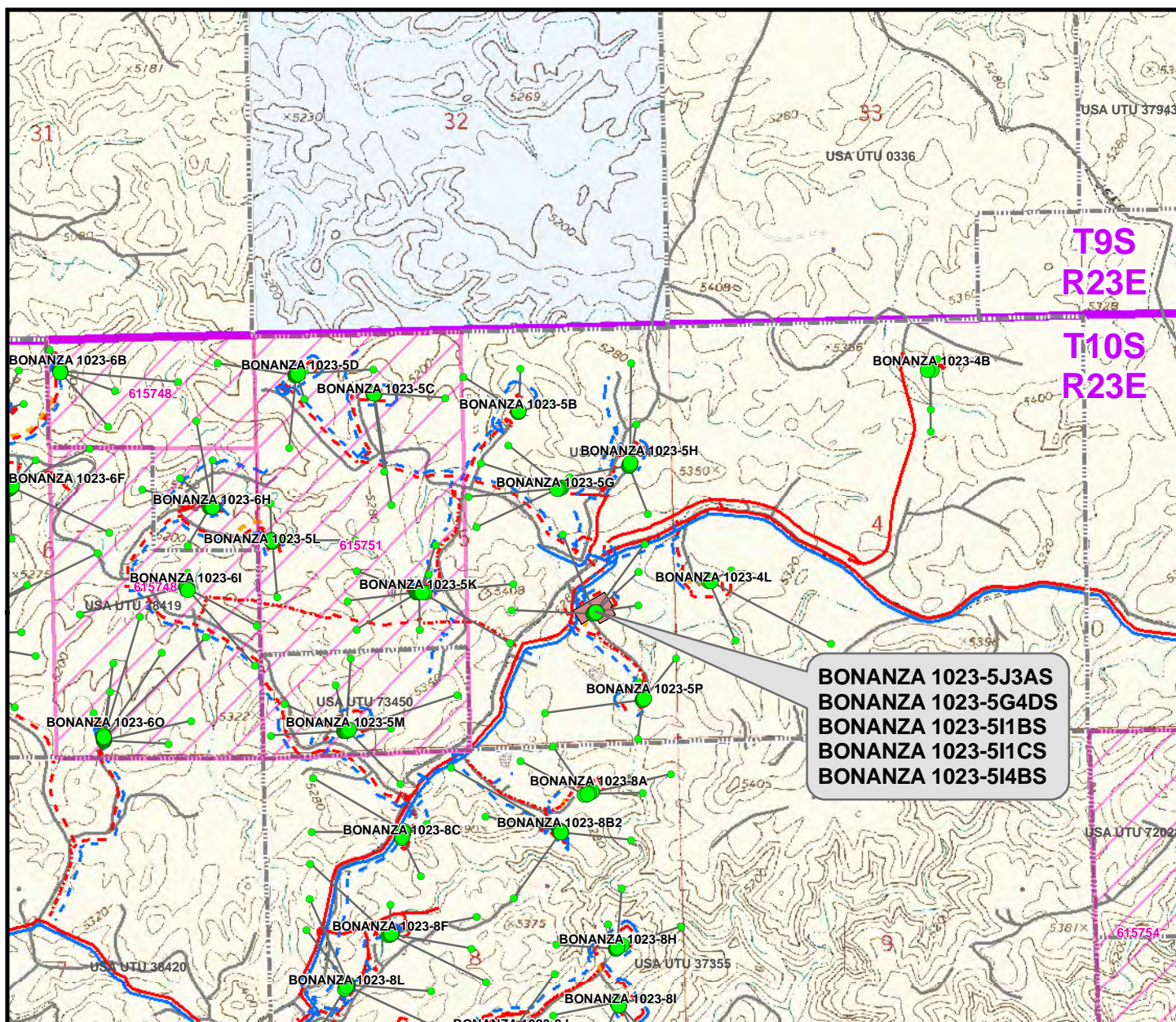
TOPO D (PAD & PIPELINE DETAIL)  
BONANZA 1023-5J3AS, BONANZA 1023-5G4DS,  
BONANZA 1023-5I1BS, BONANZA 1023-5I1CS &  
BONANZA 1023-5I4BS  
LOCATED IN SECTION 5, T10S, R23E  
S.L.B.&M., UTAH COUNTY, UTAH



|                   |                    |                    |
|-------------------|--------------------|--------------------|
| Scale: 1" = 500ft | NAD83 USP Central  | Sheet No:          |
| Drawn: CPS        | Date: 30 Mar 2010  | <b>15</b> 15 of 17 |
| Revised: TL       | Date: 25 June 2010 |                    |

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| Proposed Well      | Distance to<br>Nearest CA Boundary |
|--------------------|------------------------------------|
| BONANZA 1023-5J3AS | 510ft                              |
| BONANZA 1023-5G4DS | 1,191ft                            |
| BONANZA 1023-5I1BS | 2,238ft                            |
| BONANZA 1023-5I1CS | 2,252ft                            |
| BONANZA 1023-5I4BS | 2,134ft                            |

| Proposed Well      | Distance To<br>Nearest Lease Boundary |
|--------------------|---------------------------------------|
| BONANZA 1023-5J3AS | 628ft                                 |
| BONANZA 1023-5G4DS | 1,787ft                               |
| BONANZA 1023-5I1BS | 2,491ft                               |
| BONANZA 1023-5I1CS | 2,141ft                               |
| BONANZA 1023-5I4BS | 1,705ft                               |

#### Legend

|                        |                |                               |                                  |                 |                           |
|------------------------|----------------|-------------------------------|----------------------------------|-----------------|---------------------------|
| Well - Proposed        | Well Pad       | Gas Pipeline - Proposed       | Liquid Pipeline - Proposed       | Road - Proposed | Bureau of Land Management |
| Bottom Hole - Proposed | CA Agreement   | Gas Pipeline - To Be Upgraded | Liquid Pipeline - To Be Upgraded | Road - Existing | Indian Reservation        |
| Well Path              | Lease Boundary | Gas Pipeline - Existing       | Liquid Pipeline - Existing       |                 | State                     |
|                        |                |                               |                                  |                 | Private                   |

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1099 18th Street, Denver, Colorado 80202

#### WELL PAD - BONANZA 1023-51

**TOPO E**  
**BONANZA 1023-5J3AS, BONANZA 1023-5G4DS,**  
**BONANZA 1023-5I1BS, BONANZA 1023-5I1CS &**  
**BONANZA 1023-5I4BS**  
**LOCATED IN SECTION 5, T10S, R23E**  
**S.L.B.&M., UTAH COUNTY, UTAH**



|                     |                    |           |
|---------------------|--------------------|-----------|
| Scale: 1" = 2,000ft | NAD83 USP Central  | Sheet No: |
| Drawn: CPS          | Date: 30 Mar 2010  | <b>16</b> |
| Revised: TL         | Date: 25 June 2010 | 16 of 17  |

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**Kerr-McGee Oil & Gas Onshore, LP  
WELL PAD – BONANZA 1023-5I  
WELLS – BONANZA 1023-5J3AS, BONANZA 1023-5G4DS,  
BONANZA 1023-5I1BS, BONANZA 1023-5I1CS &  
BONANZA 1023-5I4BS  
Section 5, T10S, R23E, S.L.B.&M.**

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45; exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 14.4 miles to the intersection of the Chipeta Wells Road (County B Road 3410) which road intersection is approximately 400 feet northeast of the Mountain Fuel Bridge, at the White River. Exit left and proceed in a southeasterly direction along the Chipeta Wells Road approximately 6.7 miles to a Class D County Road to the right. Exit right and proceed in a southeasterly then southerly direction along the Class D Road approximately 1.3 miles to a second Class D County Road to the right. Exit right and proceed in a southwesterly direction along second Class D Road approximately 1.6 miles to a third Class D County Road to the left. Exit left and proceed in a southeasterly direction along third Class D Road approximately 120 feet to a fourth Class D County Road to the right. Exit right and proceed in a southwesterly direction along fourth Class D Road approximately 0.1 miles to a service road to the left. Exit left and proceed in a southeasterly direction along service road approximately 225 feet to a proposed access road to the right. Exit right and follow the road flags in a southerly direction approximately 140 feet to the proposed well pad.

Total distance from Vernal, Utah to the proposed well location is approximately 47.7 miles in a southerly direction.



# **ANADARKO PETROLEUM CORP.**

**UINTAH COUNTY, UTAH (nad 27)**

**Bonanza 1023-5I**

**BONANZA 1023-5I1CS**

**BONANZA 1023-5I1CS**

**Plan: PLAN #1 4-28-10 RHS**

## **Standard Planning Report**

**28 April, 2010**





Project: UINTAH COUNTY, UTAH (nad 27)  
 Site: Bonanza 1023-5I  
 Well: BONANZA 1023-5I1CS  
 Wellbore: BONANZA 1023-5I1CS  
 Section: SECTION 5 T10S R23E  
 SHL: 1634 FSL 1030 FEL  
 Design: PLAN #1 4-28-10 RHS  
 Latitude: 39° 58' 30.868 N  
 Longitude: 109° 20' 39.566 W  
 GL: 5302.00  
 KB: WELL @ 5311.00ft (Original Well Elev)



# Weatherford®



Azimuths to True North  
 Magnetic North: 11.17°

Magnetic Field  
 Strength: 52463.0nT  
 Dip Angle: 65.93°  
 Date: 4/28/2010  
 Model: BGGM2009

### LEGEND

BONANZA 1023-5G4DS, BONANZA 1023-5G4DS, PLAN #1 4-28-10 RHS V0  
 BONANZA 1023-5I1BS, BONANZA 1023-5I1BS, PLAN #1 4-28-10 RHS V0  
 BONANZA 1023-5I4BS, BONANZA 1023-5I4BS, PLAN #1 4-28-10 RHS V0  
 BONANZA 1023-5J3AS, BONANZA 1023-5J3AS, PLAN #1 4-28-10 RHS V0  
 Bonanza 1023-5PS EXISTING, Bonanza 1023-5PS EXISTING, Bonanza 1023-5PS EXISTING V0  
 Southman Canyon 4-5 EXISTING, Southman Canyon 4-5 EXISTING, Southman Canyon 4-5 EXISTING V0  
 PLAN #1 4-28-10 RHS

### FORMATION TOP DETAILS

| TVDPath | MDPath  | Formation   |
|---------|---------|-------------|
| 1226.00 | 1256.96 | GREEN RIVER |
| 4185.00 | 4301.14 | WASATCH     |
| 7197.00 | 7313.14 | MESAVERDE   |

### CASING DETAILS

| TVD     | MD      | Name   | Size |
|---------|---------|--------|------|
| 1980.00 | 2059.33 | 8 5/8" | 8.62 |

### SECTION DETAILS

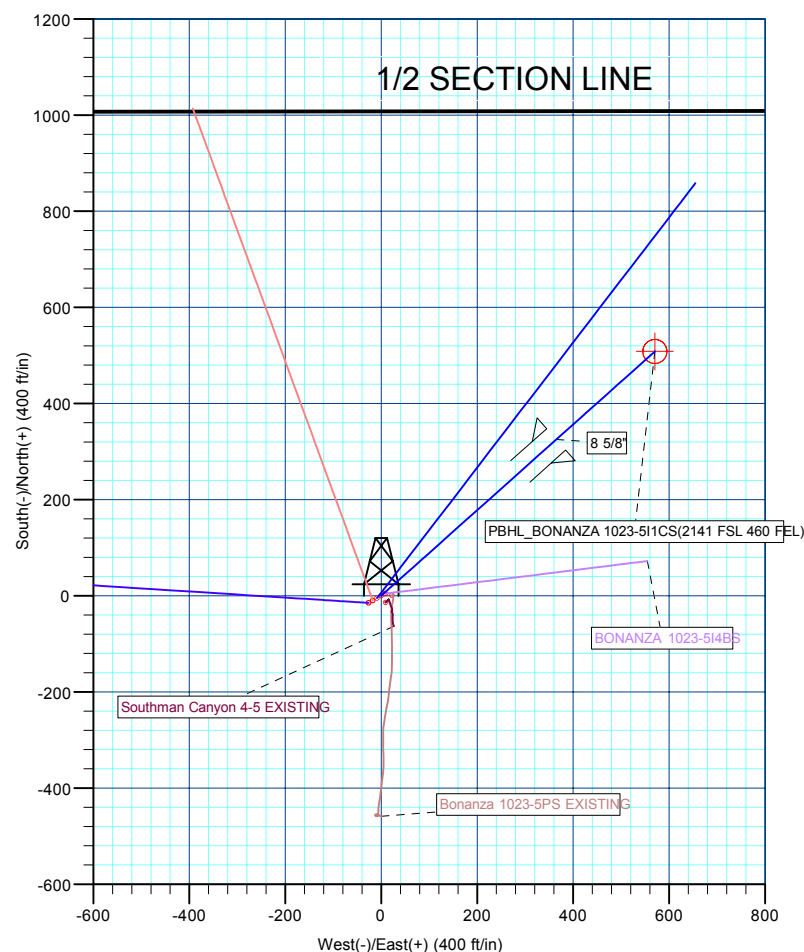
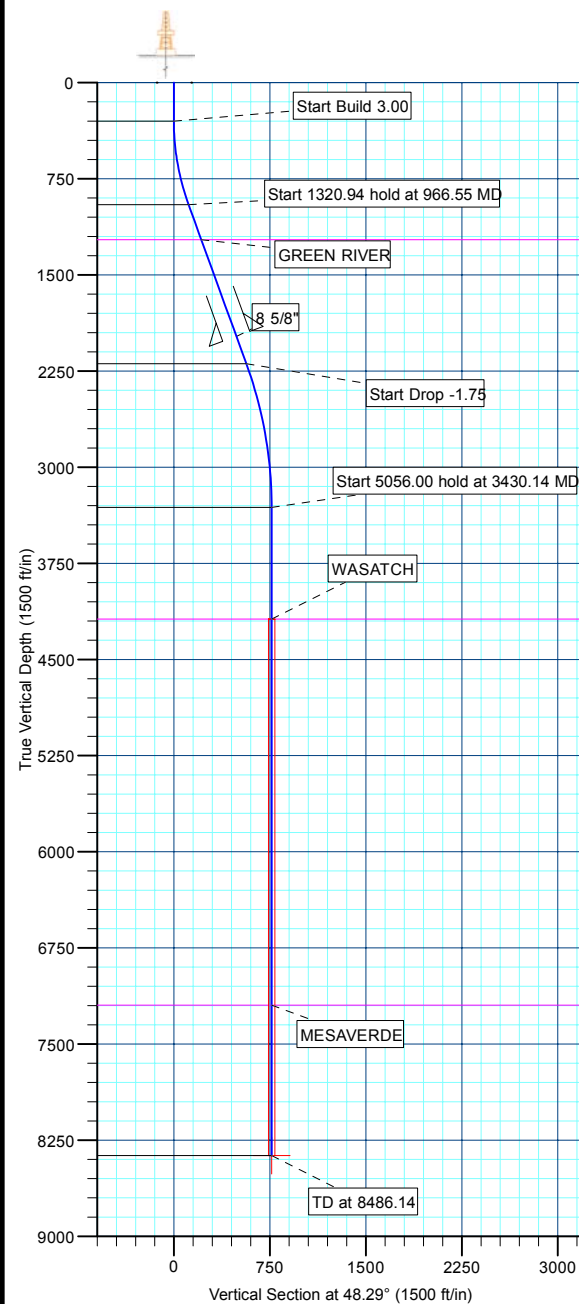
| MD      | Inc   | Azi   | TVD     | +N/-S  | +E/-W  | DLeg | TFace  | VSec   | Annotation                       |
|---------|-------|-------|---------|--------|--------|------|--------|--------|----------------------------------|
| 0.00    | 0.00  | 0.00  | 0.00    | 0.00   | 0.00   | 0.00 | 0.00   | 0.00   |                                  |
| 300.00  | 0.00  | 0.00  | 300.00  | 0.00   | 0.00   | 0.00 | 0.00   | 0.00   | Start Build 3.00                 |
| 966.55  | 20.00 | 48.29 | 963.10  | 76.60  | 85.96  | 3.00 | 48.29  | 115.14 | Start 1320.94 hold at 966.55 MD  |
| 2287.49 | 20.00 | 48.29 | 2194.40 | 377.14 | 423.18 | 0.00 | 0.00   | 566.85 | Start Drop -1.75                 |
| 3430.14 | 0.00  | 0.00  | 3314.00 | 508.46 | 570.54 | 1.75 | 180.00 | 764.23 | Start 5056.00 hold at 3430.14 MD |
| 8486.14 | 0.00  | 0.00  | 8370.00 | 508.46 | 570.54 | 0.00 | 0.00   | 764.23 | TD at 8486.14                    |

### WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

| PBHL | Name | TVD     | +N/-S  | +E/-W  | Latitude         | Longitude         | Shape                  |
|------|------|---------|--------|--------|------------------|-------------------|------------------------|
|      |      | 8370.00 | 508.46 | 570.54 | 39° 58' 35.893 N | 109° 20' 32.237 W | Circle (Radius: 25.00) |

### WELL DETAILS: BONANZA 1023-5I1CS

| +N/-S | +E/-W | Northing    | Ground Level: | 5302.00    | Longitude        | Slot              |
|-------|-------|-------------|---------------|------------|------------------|-------------------|
| 0.00  | 0.00  | 14521335.30 | Easting       | 2104281.31 | 39° 58' 30.868 N | 109° 20' 39.566 W |



Plan: PLAN #1 4-28-10 RHS (BONANZA 1023-5I1CS/BONANZA 1023-5I1CS)

Created By: Robert H. Scott Date: 9:37, April 28 2010



|                  |                              |                                     |                                       |
|------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db   | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-511CS               |
| <b>Company:</b>  | ANADARKO PETROLEUM CORP.     | <b>TVD Reference:</b>               | WELL @ 5311.00ft (Original Well Elev) |
| <b>Project:</b>  | UINTAH COUNTY, UTAH (nad 27) | <b>MD Reference:</b>                | WELL @ 5311.00ft (Original Well Elev) |
| <b>Site:</b>     | Bonanza 1023-5I              | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | BONANZA 1023-511CS           | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | BONANZA 1023-511CS           |                                     |                                       |
| <b>Design:</b>   | PLAN #1 4-28-10 RHS          |                                     |                                       |

|                    |  |                      |                |
|--------------------|--|----------------------|----------------|
| <b>Project</b>     | UINTAH COUNTY, UTAH (nad 27),                |                      |                |
| <b>Map System:</b> | Universal Transverse Mercator (US Survey Fee | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)                      |                      |                |
| <b>Map Zone:</b>   | Zone 12N (114 W to 108 W)                    |                      |                |

|                              |                                      |                     |                  |                                     |
|------------------------------|--------------------------------------|---------------------|------------------|-------------------------------------|
| <b>Site</b>                  | Bonanza 1023-5I, SECTION 5 T10S R23E |                     |                  |                                     |
| <b>Site Position:</b>        |                                      | <b>Northing:</b>    | 14,521,340.19 ft | <b>Latitude:</b> 39° 58' 30.914 N   |
| <b>From:</b>                 | Lat/Long                             | <b>Easting:</b>     | 2,104,289.90 ft  | <b>Longitude:</b> 109° 20' 39.455 W |
| <b>Position Uncertainty:</b> | 0.00 ft                              | <b>Slot Radius:</b> | in               | <b>Grid Convergence:</b> 1.06 °     |

|                             |                    |          |                            |                  |
|-----------------------------|--------------------|----------|----------------------------|------------------|
| <b>Well</b>                 | BONANZA 1023-511CS |          |                            |                  |
| <b>Well Position</b>        | <b>+N/-S</b>       | -4.73 ft | <b>Northing:</b>           | 14,521,335.30 ft |
|                             | <b>+E/-W</b>       | -8.69 ft | <b>Easting:</b>            | 2,104,281.31 ft  |
| <b>Position Uncertainty</b> |                    | 0.00 ft  | <b>Wellhead Elevation:</b> | ft               |
|                             |                    |          | <b>Ground Level:</b>       | 5,302.00 ft      |

|                  |                    |                    |                        |                      |                            |
|------------------|--------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | BONANZA 1023-511CS |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b>  | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | BGGM2009           | 4/28/2010          | 11.17                  | 65.93                | 52,463                     |

|                          |                              |                   |                      |                      |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| <b>Design</b>            | PLAN #1 4-28-10 RHS          |                   |                      |                      |
| <b>Audit Notes:</b>      |                              |                   |                      |                      |
| <b>Version:</b>          | <b>Phase:</b>                | PLAN              | <b>Tie On Depth:</b> | 0.00                 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b>    | <b>Direction (°)</b> |
|                          | 0.00                         | 0.00              | 0.00                 | 48.29                |

| <b>Plan Sections</b> |                 |             |                     |            |            |                       |                      |                     |         |                |
|----------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|----------------------|---------------------|---------|----------------|
| Measured Depth (ft)  | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target         |
| 0.00                 | 0.00            | 0.00        | 0.00                | 0.00       | 0.00       | 0.00                  | 0.00                 | 0.00                | 0.00    |                |
| 300.00               | 0.00            | 0.00        | 300.00              | 0.00       | 0.00       | 0.00                  | 0.00                 | 0.00                | 0.00    |                |
| 966.55               | 20.00           | 48.29       | 953.10              | 76.60      | 85.96      | 3.00                  | 3.00                 | 0.00                | 48.29   |                |
| 2,287.49             | 20.00           | 48.29       | 2,194.40            | 377.14     | 423.18     | 0.00                  | 0.00                 | 0.00                | 0.00    |                |
| 3,430.14             | 0.00            | 0.00        | 3,314.00            | 508.46     | 570.54     | 1.75                  | -1.75                | 0.00                | 180.00  |                |
| 8,486.14             | 0.00            | 0.00        | 8,370.00            | 508.46     | 570.54     | 0.00                  | 0.00                 | 0.00                | 0.00    | PBHL_BONANZA 1 |



|                  |                              |                                     |                                       |
|------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db   | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-511CS               |
| <b>Company:</b>  | ANADARKO PETROLEUM CORP.     | <b>TVD Reference:</b>               | WELL @ 5311.00ft (Original Well Elev) |
| <b>Project:</b>  | UINTAH COUNTY, UTAH (nad 27) | <b>MD Reference:</b>                | WELL @ 5311.00ft (Original Well Elev) |
| <b>Site:</b>     | Bonanza 1023-51              | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | BONANZA 1023-511CS           | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | BONANZA 1023-511CS           |                                     |                                       |
| <b>Design:</b>   | PLAN #1 4-28-10 RHS          |                                     |                                       |

| Planned Survey                          |                 |             |                     |            |            |                       |                       |                      |                     |
|---|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft)                     | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| <b>Start Build 3.00</b>                 |                 |             |                     |            |            |                       |                       |                      |                     |
| 300.00                                  | 0.00            | 0.00        | 300.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                |
| 400.00                                  | 3.00            | 48.29       | 399.95              | 1.74       | 1.95       | 2.62                  | 3.00                  | 3.00                 | 0.00                |
| 500.00                                  | 6.00            | 48.29       | 499.63              | 6.96       | 7.81       | 10.46                 | 3.00                  | 3.00                 | 0.00                |
| 600.00                                  | 9.00            | 48.29       | 598.77              | 15.64      | 17.55      | 23.51                 | 3.00                  | 3.00                 | 0.00                |
| 700.00                                  | 12.00           | 48.29       | 697.08              | 27.77      | 31.16      | 41.74                 | 3.00                  | 3.00                 | 0.00                |
| 800.00                                  | 15.00           | 48.29       | 794.31              | 43.30      | 48.58      | 65.08                 | 3.00                  | 3.00                 | 0.00                |
| 900.00                                  | 18.00           | 48.29       | 890.18              | 62.19      | 69.78      | 93.48                 | 3.00                  | 3.00                 | 0.00                |
| <b>Start 1320.94 hold at 966.55 MD</b>  |                 |             |                     |            |            |                       |                       |                      |                     |
| 966.55                                  | 20.00           | 48.29       | 953.10              | 76.60      | 85.96      | 115.14                | 3.00                  | 3.00                 | 0.00                |
| 1,000.00                                | 20.00           | 48.29       | 984.53              | 84.22      | 94.50      | 126.58                | 0.00                  | 0.00                 | 0.00                |
| 1,100.00                                | 20.00           | 48.29       | 1,078.51            | 106.97     | 120.03     | 160.77                | 0.00                  | 0.00                 | 0.00                |
| 1,200.00                                | 20.00           | 48.29       | 1,172.48            | 129.72     | 145.55     | 194.97                | 0.00                  | 0.00                 | 0.00                |
| <b>GREEN RIVER</b>                      |                 |             |                     |            |            |                       |                       |                      |                     |
| 1,256.96                                | 20.00           | 48.29       | 1,226.00            | 142.68     | 160.10     | 214.45                | 0.00                  | 0.00                 | 0.00                |
| 1,300.00                                | 20.00           | 48.29       | 1,266.45            | 152.47     | 171.08     | 229.17                | 0.00                  | 0.00                 | 0.00                |
| 1,400.00                                | 20.00           | 48.29       | 1,360.42            | 175.22     | 196.61     | 263.36                | 0.00                  | 0.00                 | 0.00                |
| 1,500.00                                | 20.00           | 48.29       | 1,454.39            | 197.97     | 222.14     | 297.56                | 0.00                  | 0.00                 | 0.00                |
| 1,600.00                                | 20.00           | 48.29       | 1,548.36            | 220.73     | 247.67     | 331.75                | 0.00                  | 0.00                 | 0.00                |
| 1,700.00                                | 20.00           | 48.29       | 1,642.33            | 243.48     | 273.20     | 365.95                | 0.00                  | 0.00                 | 0.00                |
| 1,800.00                                | 20.00           | 48.29       | 1,736.31            | 266.23     | 298.73     | 400.15                | 0.00                  | 0.00                 | 0.00                |
| 1,900.00                                | 20.00           | 48.29       | 1,830.28            | 288.98     | 324.26     | 434.34                | 0.00                  | 0.00                 | 0.00                |
| 2,000.00                                | 20.00           | 48.29       | 1,924.25            | 311.73     | 349.79     | 468.54                | 0.00                  | 0.00                 | 0.00                |
| <b>8 5/8"</b>                           |                 |             |                     |            |            |                       |                       |                      |                     |
| 2,059.33                                | 20.00           | 48.29       | 1,980.00            | 325.23     | 364.93     | 488.83                | 0.00                  | 0.00                 | 0.00                |
| 2,100.00                                | 20.00           | 48.29       | 2,018.22            | 334.48     | 375.32     | 502.73                | 0.00                  | 0.00                 | 0.00                |
| 2,200.00                                | 20.00           | 48.29       | 2,112.19            | 357.23     | 400.85     | 536.93                | 0.00                  | 0.00                 | 0.00                |
| <b>Start Drop -1.75</b>                 |                 |             |                     |            |            |                       |                       |                      |                     |
| 2,287.49                                | 20.00           | 48.29       | 2,194.40            | 377.14     | 423.18     | 566.85                | 0.00                  | 0.00                 | 0.00                |
| 2,300.00                                | 19.78           | 48.29       | 2,206.17            | 379.97     | 426.36     | 571.10                | 1.75                  | -1.75                | 0.00                |
| 2,400.00                                | 18.03           | 48.29       | 2,300.77            | 401.52     | 450.54     | 603.50                | 1.75                  | -1.75                | 0.00                |
| 2,500.00                                | 16.28           | 48.29       | 2,396.32            | 421.15     | 472.56     | 632.99                | 1.75                  | -1.75                | 0.00                |
| 2,600.00                                | 14.53           | 48.29       | 2,492.73            | 438.82     | 492.39     | 659.55                | 1.75                  | -1.75                | 0.00                |
| 2,700.00                                | 12.78           | 48.29       | 2,589.90            | 454.52     | 510.01     | 683.15                | 1.75                  | -1.75                | 0.00                |
| 2,800.00                                | 11.03           | 48.29       | 2,687.74            | 468.24     | 525.40     | 703.77                | 1.75                  | -1.75                | 0.00                |
| 2,900.00                                | 9.28            | 48.29       | 2,786.17            | 479.97     | 538.56     | 721.40                | 1.75                  | -1.75                | 0.00                |
| 3,000.00                                | 7.53            | 48.29       | 2,885.10            | 489.69     | 549.47     | 736.01                | 1.75                  | -1.75                | 0.00                |
| 3,100.00                                | 5.78            | 48.29       | 2,984.42            | 497.40     | 558.12     | 747.60                | 1.75                  | -1.75                | 0.00                |
| 3,200.00                                | 4.03            | 48.29       | 3,084.05            | 503.08     | 564.50     | 756.14                | 1.75                  | -1.75                | 0.00                |
| 3,300.00                                | 2.28            | 48.29       | 3,183.90            | 506.74     | 568.60     | 761.64                | 1.75                  | -1.75                | 0.00                |
| 3,400.00                                | 0.53            | 48.29       | 3,283.86            | 508.37     | 570.43     | 764.09                | 1.75                  | -1.75                | 0.00                |
| <b>Start 5056.00 hold at 3430.14 MD</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 3,430.14                                | 0.00            | 0.00        | 3,314.00            | 508.46     | 570.54     | 764.23                | 1.75                  | -1.75                | 0.00                |
| 3,500.00                                | 0.00            | 0.00        | 3,383.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 3,600.00                                | 0.00            | 0.00        | 3,483.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 3,700.00                                | 0.00            | 0.00        | 3,583.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 3,800.00                                | 0.00            | 0.00        | 3,683.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 3,900.00                                | 0.00            | 0.00        | 3,783.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 4,000.00                                | 0.00            | 0.00        | 3,883.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 4,100.00                                | 0.00            | 0.00        | 3,983.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 4,200.00                                | 0.00            | 0.00        | 4,083.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 4,300.00                                | 0.00            | 0.00        | 4,183.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| <b>WASATCH</b>                          |                 |             |                     |            |            |                       |                       |                      |                     |



|                  |                              |                                     |                                       |
|------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db   | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-511CS               |
| <b>Company:</b>  | ANADARKO PETROLEUM CORP.     | <b>TVD Reference:</b>               | WELL @ 5311.00ft (Original Well Elev) |
| <b>Project:</b>  | UINTAH COUNTY, UTAH (nad 27) | <b>MD Reference:</b>                | WELL @ 5311.00ft (Original Well Elev) |
| <b>Site:</b>     | Bonanza 1023-51              | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | BONANZA 1023-511CS           | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | BONANZA 1023-511CS           |                                     |                                       |
| <b>Design:</b>   | PLAN #1 4-28-10 RHS          |                                     |                                       |

## Planned Survey

| Measured Depth (ft)                              | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|--|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 4,301.14   | 0.00            | 0.00        | 4,185.00            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 4,400.00   | 0.00            | 0.00        | 4,283.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 4,500.00   | 0.00            | 0.00        | 4,383.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 4,600.00   | 0.00            | 0.00        | 4,483.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 4,700.00   | 0.00            | 0.00        | 4,583.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 4,800.00   | 0.00            | 0.00        | 4,683.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 4,900.00   | 0.00            | 0.00        | 4,783.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 5,000.00   | 0.00            | 0.00        | 4,883.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 5,100.00   | 0.00            | 0.00        | 4,983.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 5,200.00   | 0.00            | 0.00        | 5,083.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 5,300.00   | 0.00            | 0.00        | 5,183.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 5,400.00   | 0.00            | 0.00        | 5,283.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 5,500.00   | 0.00            | 0.00        | 5,383.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 5,600.00   | 0.00            | 0.00        | 5,483.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 5,700.00   | 0.00            | 0.00        | 5,583.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 5,800.00   | 0.00            | 0.00        | 5,683.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 5,900.00   | 0.00            | 0.00        | 5,783.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 6,000.00   | 0.00            | 0.00        | 5,883.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 6,100.00   | 0.00            | 0.00        | 5,983.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 6,200.00   | 0.00            | 0.00        | 6,083.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 6,300.00   | 0.00            | 0.00        | 6,183.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 6,400.00   | 0.00            | 0.00        | 6,283.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 6,500.00   | 0.00            | 0.00        | 6,383.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 6,600.00   | 0.00            | 0.00        | 6,483.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 6,700.00   | 0.00            | 0.00        | 6,583.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 6,800.00   | 0.00            | 0.00        | 6,683.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 6,900.00   | 0.00            | 0.00        | 6,783.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 7,000.00   | 0.00            | 0.00        | 6,883.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 7,100.00   | 0.00            | 0.00        | 6,983.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 7,200.00   | 0.00            | 0.00        | 7,083.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 7,300.00   | 0.00            | 0.00        | 7,183.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| <b>MESAVERDE</b>                                 |                 |             |                     |            |            |                       |                       |                      |                     |
| 7,313.14   | 0.00            | 0.00        | 7,197.00            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 7,400.00   | 0.00            | 0.00        | 7,283.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 7,500.00   | 0.00            | 0.00        | 7,383.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 7,600.00   | 0.00            | 0.00        | 7,483.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 7,700.00   | 0.00            | 0.00        | 7,583.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 7,800.00   | 0.00            | 0.00        | 7,683.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 7,900.00   | 0.00            | 0.00        | 7,783.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 8,000.00   | 0.00            | 0.00        | 7,883.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 8,100.00   | 0.00            | 0.00        | 7,983.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 8,200.00   | 0.00            | 0.00        | 8,083.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 8,300.00   | 0.00            | 0.00        | 8,183.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| 8,400.00   | 0.00            | 0.00        | 8,283.86            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |
| <b>PBHL_BONANZA 1023-511CS(2141 FSL 460 FEL)</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 8,486.14   | 0.00            | 0.00        | 8,370.00            | 508.46     | 570.54     | 764.23                | 0.00                  | 0.00                 | 0.00                |



|                  |                              |                                     |                                       |
|------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db   | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-511CS               |
| <b>Company:</b>  | ANADARKO PETROLEUM CORP.     | <b>TVD Reference:</b>               | WELL @ 5311.00ft (Original Well Elev) |
| <b>Project:</b>  | UINTAH COUNTY, UTAH (nad 27) | <b>MD Reference:</b>                | WELL @ 5311.00ft (Original Well Elev) |
| <b>Site:</b>     | Bonanza 1023-5I              | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | BONANZA 1023-511CS           | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | BONANZA 1023-511CS           |                                     |                                       |
| <b>Design:</b>   | PLAN #1 4-28-10 RHS          |                                     |                                       |

**Design Targets**
**Target Name**

| - hit/miss target         | Dip Angle<br>(°) | Dip Dir.<br>(°) | TVD<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Northing<br>(ft) | Easting<br>(ft) | Latitude         | Longitude         |
|---------------------------|------------------|-----------------|-------------|---------------|---------------|------------------|-----------------|------------------|-------------------|
| - Shape                   |                  |                 |             |               |               |                  |                 |                  |                   |
| PBHL_BONANZA 1023-511CS   | 0.00             | 0.00            | 8,370.00    | 508.46        | 570.54        | 14,521,854.26    | 2,104,842.30    | 39° 58' 35.893 N | 109° 20' 32.237 W |
| - plan hits target center |                  |                 |             |               |               |                  |                 |                  |                   |
| - Circle (radius 25.00)   |                  |                 |             |               |               |                  |                 |                  |                   |

**Casing Points**

| Measured<br>Depth<br>(ft) | Vertical<br>Depth<br>(ft) | Name   | Casing<br>Diameter<br>(in) | Hole<br>Diameter<br>(in) |
|---------------------------|---------------------------|--------|----------------------------|--------------------------|
| 2,059.33                  | 1,980.00                  | 8 5/8" | 8.62                       | 11.00                    |

**Formations**

| Measured<br>Depth<br>(ft) | Vertical<br>Depth<br>(ft) | Name        | Lithology | Dip<br>(°) | Dip<br>Direction<br>(°) |
|---------------------------|---------------------------|-------------|-----------|------------|-------------------------|
| 1,256.96                  | 1,226.00                  | GREEN RIVER |           |            |                         |
| 4,301.14                  | 4,185.00                  | WASATCH     |           |            |                         |
| 7,313.14                  | 7,197.00                  | MESAVERDE   |           |            |                         |

**Plan Annotations**

| Measured<br>Depth<br>(ft) | Vertical<br>Depth<br>(ft) | Local Coordinates |               | Comment                          |
|---------------------------|---------------------------|-------------------|---------------|----------------------------------|
|                           |                           | +N/-S<br>(ft)     | +E/-W<br>(ft) |                                  |
| 300.00                    | 300.00                    | 0.00              | 0.00          | Start Build 3.00                 |
| 966.55                    | 953.10                    | 76.60             | 85.96         | Start 1320.94 hold at 966.55 MD  |
| 2,287.49                  | 2,194.40                  | 377.14            | 423.18        | Start Drop -1.75                 |
| 3,430.14                  | 3,314.00                  | 508.46            | 570.54        | Start 5056.00 hold at 3430.14 MD |
| 8,486.14                  | 8,370.00                  | 508.46            | 570.54        | TD at 8486.14                    |



# **ANADARKO PETROLEUM CORP.**

**UINTAH COUNTY, UTAH (nad 27)**

**Bonanza 1023-5I**

**BONANZA 1023-5I1CS**

**BONANZA 1023-5I1CS**

**PLAN #1 4-28-10 RHS**

## **Anticollision Report**

**28 April, 2010**



**Weatherford®**





|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-511CS               |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5311.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | Bonanza 1023-51              | <b>MD Reference:</b>                | WELL @ 5311.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | BONANZA 1023-511CS           | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | BONANZA 1023-511CS           | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 4-28-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

**Reference** PLAN #1 4-28-10 RHS

|                                     |   |                       |                     |
|-------------------------------------|---|-----------------------|---------------------|
| <b>Filter type:</b>                 | NO GLOBAL FILTER: Using user defined selection & filtering criteria |                       |                     |
| <b>Interpolation Method:</b>        | Stations  | <b>Error Model:</b>   | ISCWSA              |
| <b>Depth Range:</b>                 | 0.00 to 20,000.00ft   | <b>Scan Method:</b>   | Closest Approach 3D |
| <b>Results Limited by:</b>          | Maximum center-center distance of 10,000.00ft                       | <b>Error Surface:</b> | Elliptical Conic    |
| <b>Warning Levels Evaluated at:</b> | 2.00 Sigma  |                       |                     |

**Survey Tool Program** Date 4/28/2010

| From (ft) | To (ft)  | Survey (Wellbore)                  | Tool Name | Description    |
|-----------|----------|------------------------------------|-----------|----------------|
| 0.00      | 8,486.14 | PLAN #1 4-28-10 RHS (BONANZA 1023- | MWD       | MWD - Standard |

**Summary**

| Site Name<br>Offset Well - Wellbore - Design      | Reference<br>Measured<br>Depth<br>(ft) | Offset<br>Measured<br>Depth<br>(ft) | Distance<br>Between<br>Centres<br>(ft) | Between<br>Ellipses<br>(ft) | Separation<br>Factor | Warning |
|---|--|-------------------------------------|--|-----------------------------|----------------------|---------|
| Bonanza 1023-51                                   |  |                                     |  |                             |                      |         |
| BONANZA 1023-5G4DS - BONANZA 1023-5G4DS - PL/     | 300.00                                 | 300.00                              | 19.96                                  | 18.86                       | 18.090               | CC, ES  |
| BONANZA 1023-5G4DS - BONANZA 1023-5G4DS - PL/     | 400.00                                 | 400.06                              | 22.27                                  | 20.71                       | 14.288               | SF      |
| BONANZA 1023-511BS - BONANZA 1023-511BS - PLAN    | 300.00                                 | 300.00                              | 9.89                                   | 8.79                        | 8.965                | CC, ES  |
| BONANZA 1023-511BS - BONANZA 1023-511BS - PLAN    | 4,300.00                               | 4,297.34                            | 146.49                                 | 113.19                      | 4.400                | SF      |
| BONANZA 1023-514BS - BONANZA 1023-514BS - PLAN    | 371.97                                 | 371.62                              | 9.86                                   | 8.44                        | 6.956                | CC      |
| BONANZA 1023-514BS - BONANZA 1023-514BS - PLAN    | 400.00                                 | 399.50                              | 9.89                                   | 8.35                        | 6.431                | ES      |
| BONANZA 1023-514BS - BONANZA 1023-514BS - PLAN    | 500.00                                 | 498.85                              | 11.24                                  | 9.26                        | 5.682                | SF      |
| BONANZA 1023-5J3AS - BONANZA 1023-5J3AS - PLAN    | 300.00                                 | 300.00                              | 29.86                                  | 28.75                       | 27.054               | CC, ES  |
| BONANZA 1023-5J3AS - BONANZA 1023-5J3AS - PLAN    | 400.00                                 | 398.98                              | 33.87                                  | 32.31                       | 21.807               | SF      |
| Bonanza 1023-5PS EXISTING - Bonanza 1023-5PS EXI  | 562.28                                 | 570.46                              | 13.78                                  | 11.92                       | 7.426                | CC, ES  |
| Bonanza 1023-5PS EXISTING - Bonanza 1023-5PS EXI  | 600.00                                 | 607.78                              | 14.83                                  | 12.79                       | 7.245                | SF      |
| Southman Canyon 4-5 EXISTING - Southman Canyon 4- | 291.53                                 | 277.54                              | 15.85                                  | 14.78                       | 14.801               | CC      |
| Southman Canyon 4-5 EXISTING - Southman Canyon 4- | 400.00                                 | 386.01                              | 16.26                                  | 14.72                       | 10.582               | ES      |
| Southman Canyon 4-5 EXISTING - Southman Canyon 4- | 500.00                                 | 485.72                              | 19.38                                  | 17.36                       | 9.574                | SF      |

| <b>Offset Design</b> Bonanza 1023-51 - BONANZA 1023-5G4DS - BONANZA 1023-5G4DS - PLAN #1 4-28-10 RHS |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | <b>Offset Site Error:</b> | 0.00 ft |
|--|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|---------------------------|---------|
| Survey Program: 0-MWD  |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | <b>Offset Well Error:</b> | 0.00 ft |
| Reference  | Offset              | Semi Major Axis     |                     |                | Distance    |                       |                                   |            |                      |                       |                         |                           | Warning |
| Measured Depth (ft)  | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor         |         |
| 0.00   | 0.00                | 0.00                | 0.00                | 0.00           | 0.00        | -119.51               | -9.83                             | -17.37     | 19.96                |                       |                         |                           |         |
| 100.00   | 100.00              | 100.00              | 100.00              | 0.10           | 0.10        | -119.51               | -9.83                             | -17.37     | 19.96                | 19.76                 | 0.20                    | 97.607                    |         |
| 200.00   | 200.00              | 200.00              | 200.00              | 0.33           | 0.33        | -119.51               | -9.83                             | -17.37     | 19.96                | 19.31                 | 0.65                    | 30.523                    |         |
| 300.00   | 300.00              | 300.00              | 300.00              | 0.55           | 0.55        | -119.51               | -9.83                             | -17.37     | 19.96                | 18.86                 | 1.10                    | 18.090                    | CC, ES  |
| 400.00   | 399.95              | 400.06              | 400.04              | 0.78           | 0.78        | -164.77               | -8.19                             | -17.98     | 22.27                | 20.71                 | 1.56                    | 14.288                    | SF      |
| 500.00   | 499.63              | 499.80              | 499.66              | 1.02           | 1.01        | -159.43               | -3.70                             | -19.62     | 29.43                | 27.41                 | 2.02                    | 14.549                    |         |
| 600.00   | 598.77              | 599.05              | 598.78              | 1.28           | 1.24        | -158.42               | 1.18                              | -21.41     | 41.56                | 39.06                 | 2.50                    | 16.634                    |         |
| 700.00   | 697.08              | 697.58              | 697.17              | 1.62           | 1.47        | -159.70               | 6.02                              | -23.18     | 58.53                | 55.55                 | 2.98                    | 19.619                    |         |
| 800.00   | 794.31              | 795.12              | 794.58              | 2.04           | 1.70        | -161.56               | 10.81                             | -24.94     | 80.38                | 76.91                 | 3.47                    | 23.133                    |         |
| 900.00   | 890.18              | 891.41              | 890.73              | 2.55           | 1.93        | -163.36               | 15.54                             | -26.68     | 107.15               | 103.18                | 3.97                    | 26.985                    |         |
| 966.55   | 953.10              | 954.66              | 953.90              | 2.94           | 2.08        | -164.42               | 18.65                             | -27.82     | 127.68               | 123.38                | 4.30                    | 29.677                    |         |
| 1,000.00   | 984.53              | 986.27              | 985.47              | 3.15           | 2.16        | -164.97               | 20.20                             | -28.38     | 138.56               | 134.08                | 4.47                    | 30.979                    |         |
| 1,100.00   | 1,078.51            | 1,080.77            | 1,079.84            | 3.79           | 2.39        | -166.21               | 24.85                             | -30.09     | 171.11               | 166.12                | 4.99                    | 34.303                    |         |
| 1,200.00   | 1,172.48            | 1,175.27            | 1,174.21            | 4.45           | 2.61        | -167.05               | 29.49                             | -31.79     | 203.71               | 198.20                | 5.51                    | 36.955                    |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Weatherford International Ltd.

## Anticollision Report



|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-511CS               |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5311.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | Bonanza 1023-51              | <b>MD Reference:</b>                | WELL @ 5311.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | BONANZA 1023-511CS           | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | BONANZA 1023-511CS           | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 4-28-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design Bonanza 1023-51 - BONANZA 1023-5G4DS - BONANZA 1023-5G4DS - PLAN #1 4-28-10 RHS |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|---|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD   |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.00 ft |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 1,300.00  | 1,266.45            | 1,269.77            | 1,268.58            | 5.11           | 2.84        | -167.65               | 34.14                             | -33.49     | 236.34               | 230.30                | 6.04                    | 39.114             |         |
| 1,400.00  | 1,360.42            | 1,364.27            | 1,362.95            | 5.78           | 3.07        | -168.11               | 38.78                             | -35.19     | 268.99               | 262.41                | 6.58                    | 40.892             |         |
| 1,500.00  | 1,454.39            | 1,458.78            | 1,457.32            | 6.46           | 3.30        | -168.47               | 43.42                             | -36.89     | 301.65               | 294.54                | 7.12                    | 42.386             |         |
| 1,600.00  | 1,548.36            | 1,553.28            | 1,551.70            | 7.14           | 3.53        | -168.76               | 48.07                             | -38.60     | 334.32               | 326.66                | 7.66                    | 43.654             |         |
| 1,700.00  | 1,642.33            | 1,647.78            | 1,646.07            | 7.81           | 3.75        | -169.00               | 52.71                             | -40.30     | 367.00               | 358.80                | 8.20                    | 44.743             |         |
| 1,800.00  | 1,736.31            | 1,742.28            | 1,740.44            | 8.50           | 3.98        | -169.20               | 57.35                             | -42.00     | 399.68               | 390.93                | 8.75                    | 45.688             |         |
| 1,900.00  | 1,830.28            | 1,836.78            | 1,834.81            | 9.18           | 4.21        | -169.37               | 62.00                             | -43.70     | 432.36               | 423.07                | 9.30                    | 46.514             |         |
| 2,000.00  | 1,924.25            | 1,931.28            | 1,929.18            | 9.86           | 4.44        | -169.52               | 66.64                             | -45.41     | 465.05               | 455.21                | 9.84                    | 47.242             |         |
| 2,100.00  | 2,018.22            | 2,025.78            | 2,023.55            | 10.55          | 4.67        | -169.64               | 71.28                             | -47.11     | 497.74               | 487.35                | 10.39                   | 47.889             |         |
| 2,200.00  | 2,112.19            | 2,120.76            | 2,118.40            | 11.23          | 4.90        | -169.75               | 75.97                             | -48.82     | 530.43               | 519.48                | 10.95                   | 48.457             |         |
| 2,287.49  | 2,194.40            | 2,208.75            | 2,206.10            | 11.83          | 5.13        | -169.59               | 82.55                             | -51.24     | 558.56               | 547.10                | 11.46                   | 48.723             |         |
| 2,300.00  | 2,206.17            | 2,221.37            | 2,218.65            | 11.91          | 5.16        | -169.55               | 83.81                             | -51.70     | 562.50               | 550.95                | 11.55                   | 48.719             |         |
| 2,400.00  | 2,300.77            | 2,322.76            | 2,319.10            | 12.43          | 5.46        | -168.88               | 96.71                             | -56.43     | 591.83               | 579.63                | 12.20                   | 48.513             |         |
| 2,500.00  | 2,396.32            | 2,424.50            | 2,419.00            | 12.92          | 5.81        | -167.72               | 114.67                            | -63.01     | 617.47               | 604.56                | 12.91                   | 47.812             |         |
| 2,600.00  | 2,492.73            | 2,525.69            | 2,517.23            | 13.38          | 6.20        | -166.12               | 137.47                            | -71.36     | 639.71               | 626.00                | 13.70                   | 46.688             |         |
| 2,700.00  | 2,589.90            | 2,625.50            | 2,612.72            | 13.79          | 6.65        | -164.15               | 164.71                            | -81.34     | 658.95               | 644.38                | 14.57                   | 45.229             |         |
| 2,800.00  | 2,687.74            | 2,722.08            | 2,703.72            | 14.17          | 7.14        | -161.91               | 195.06                            | -92.47     | 675.76               | 660.25                | 15.51                   | 43.581             |         |
| 2,900.00  | 2,786.17            | 2,816.79            | 2,792.72            | 14.50          | 7.66        | -159.70               | 225.47                            | -103.61    | 690.80               | 674.33                | 16.46                   | 41.958             |         |
| 3,000.00  | 2,885.10            | 2,911.58            | 2,881.80            | 14.80          | 8.19        | -157.49               | 255.92                            | -114.77    | 704.19               | 686.75                | 17.43                   | 40.392             |         |
| 3,100.00  | 2,984.42            | 3,006.37            | 2,970.87            | 15.05          | 8.74        | -155.28               | 286.36                            | -125.93    | 715.99               | 697.58                | 18.41                   | 38.899             |         |
| 3,200.00  | 3,084.05            | 3,101.07            | 3,059.85            | 15.25          | 9.31        | -153.05               | 316.78                            | -137.07    | 726.29               | 706.92                | 19.37                   | 37.491             |         |
| 3,300.00  | 3,183.90            | 3,195.58            | 3,148.67            | 15.42          | 9.88        | -150.77               | 347.13                            | -148.20    | 735.20               | 714.88                | 20.33                   | 36.172             |         |
| 3,400.00  | 3,283.86            | 3,289.83            | 3,237.22            | 15.54          | 10.46       | -148.45               | 377.40                            | -159.29    | 742.85               | 721.59                | 21.26                   | 34.949             |         |
| 3,430.14  | 3,314.00            | 3,318.16            | 3,263.85            | 15.57          | 10.63       | -99.44                | 386.50                            | -162.63    | 744.93               | 723.40                | 21.53                   | 34.599             |         |
| 3,500.00  | 3,383.86            | 3,383.81            | 3,325.54            | 15.64          | 11.04       | -97.75                | 407.58                            | -170.35    | 749.99               | 727.80                | 22.19                   | 33.799             |         |
| 3,600.00  | 3,483.86            | 3,477.78            | 3,413.84            | 15.73          | 11.63       | -95.37                | 437.76                            | -181.41    | 758.50               | 735.38                | 23.12                   | 32.805             |         |
| 3,700.00  | 3,583.86            | 3,571.75            | 3,502.14            | 15.83          | 12.23       | -93.04                | 467.94                            | -192.47    | 768.44               | 744.41                | 24.03                   | 31.977             |         |
| 3,800.00  | 3,683.86            | 3,665.72            | 3,590.44            | 15.94          | 12.83       | -90.77                | 498.12                            | -203.53    | 779.75               | 754.84                | 24.91                   | 31.297             |         |
| 3,900.00  | 3,783.86            | 3,759.68            | 3,678.74            | 16.04          | 13.44       | -88.55                | 528.30                            | -214.59    | 792.38               | 766.61                | 25.77                   | 30.747             |         |
| 4,000.00  | 3,883.86            | 3,853.65            | 3,767.04            | 16.15          | 14.04       | -86.41                | 558.48                            | -225.65    | 806.26               | 779.67                | 26.60                   | 30.313             |         |
| 4,100.00  | 3,983.86            | 3,947.62            | 3,855.34            | 16.26          | 14.65       | -84.33                | 588.66                            | -236.71    | 821.34               | 793.94                | 27.39                   | 29.983             |         |
| 4,200.00  | 4,083.86            | 4,041.59            | 3,943.64            | 16.37          | 15.27       | -82.32                | 618.84                            | -247.77    | 837.54               | 809.38                | 28.16                   | 29.743             |         |
| 4,300.00  | 4,183.86            | 4,135.56            | 4,031.94            | 16.49          | 15.88       | -80.38                | 649.02                            | -258.83    | 854.80               | 825.91                | 28.89                   | 29.583             |         |
| 4,400.00  | 4,283.86            | 4,229.52            | 4,120.24            | 16.60          | 16.50       | -78.52                | 679.20                            | -269.89    | 873.06               | 843.46                | 29.60                   | 29.495             |         |
| 4,500.00  | 4,383.86            | 4,323.49            | 4,208.54            | 16.72          | 17.12       | -76.72                | 709.38                            | -280.95    | 892.26               | 861.98                | 30.28                   | 29.468             |         |
| 4,600.00  | 4,483.86            | 4,417.46            | 4,296.84            | 16.84          | 17.74       | -75.00                | 739.56                            | -292.01    | 912.34               | 881.41                | 30.93                   | 29.497             |         |
| 4,700.00  | 4,583.86            | 4,511.43            | 4,385.14            | 16.97          | 18.37       | -73.35                | 769.74                            | -303.07    | 933.24               | 901.69                | 31.56                   | 29.574             |         |
| 4,800.00  | 4,683.86            | 4,605.40            | 4,473.44            | 17.09          | 18.99       | -71.77                | 799.92                            | -314.13    | 954.91               | 922.75                | 32.16                   | 29.693             |         |
| 4,900.00  | 4,783.86            | 4,699.36            | 4,561.74            | 17.22          | 19.62       | -70.25                | 830.10                            | -325.19    | 977.30               | 944.56                | 32.74                   | 29.849             |         |
| 5,000.00  | 4,883.86            | 4,801.65            | 4,657.93            | 17.35          | 20.27       | -68.68                | 862.76                            | -337.16    | 1,000.24             | 966.92                | 33.32                   | 30.019             |         |
| 5,100.00  | 4,983.86            | 4,927.42            | 4,777.50            | 17.48          | 20.89       | -67.01                | 899.34                            | -350.57    | 1,021.66             | 987.81                | 33.85                   | 30.179             |         |
| 5,200.00  | 5,083.86            | 5,056.62            | 4,901.99            | 17.62          | 21.46       | -65.60                | 931.75                            | -362.44    | 1,040.53             | 1,006.18              | 34.35                   | 30.290             |         |
| 5,300.00  | 5,183.86            | 5,188.83            | 5,030.86            | 17.75          | 21.97       | -64.44                | 959.43                            | -372.59    | 1,056.53             | 1,021.71              | 34.82                   | 30.343             |         |
| 5,400.00  | 5,283.86            | 5,323.58            | 5,163.46            | 17.89          | 22.41       | -63.54                | 981.86                            | -380.81    | 1,069.42             | 1,034.17              | 35.25                   | 30.338             |         |
| 5,500.00  | 5,383.86            | 5,460.33            | 5,299.04            | 18.03          | 22.77       | -62.89                | 998.61                            | -386.95    | 1,078.99             | 1,043.34              | 35.65                   | 30.267             |         |
| 5,600.00  | 5,483.86            | 5,598.51            | 5,436.72            | 18.17          | 23.06       | -62.48                | 1,009.35                          | -390.88    | 1,085.10             | 1,049.08              | 36.02                   | 30.125             |         |
| 5,700.00  | 5,583.86            | 5,737.47            | 5,575.59            | 18.31          | 23.26       | -62.31                | 1,013.86                          | -392.53    | 1,087.66             | 1,051.30              | 36.35                   | 29.918             |         |
| 5,800.00  | 5,683.86            | 5,845.74            | 5,683.86            | 18.45          | 23.38       | -62.31                | 1,014.00                          | -392.58    | 1,087.74             | 1,051.09              | 36.65                   | 29.683             |         |
| 5,900.00  | 5,783.86            | 5,945.74            | 5,783.86            | 18.60          | 23.49       | -62.31                | 1,014.00                          | -392.58    | 1,087.74             | 1,050.80              | 36.93                   | 29.452             |         |
| 6,000.00  | 5,883.86            | 6,045.74            | 5,883.86            | 18.75          | 23.61       | -62.31                | 1,014.00                          | -392.58    | 1,087.74             | 1,050.51              | 37.22                   | 29.222             |         |
| 6,100.00  | 5,983.86            | 6,145.74            | 5,983.86            | 18.89          | 23.72       | -62.31                | 1,014.00                          | -392.58    | 1,087.74             | 1,050.22              | 37.52                   | 28.993             |         |
| 6,200.00  | 6,083.86            | 6,245.74            | 6,083.86            | 19.04          | 23.84       | -62.31                | 1,014.00                          | -392.58    | 1,087.74             | 1,049.92              | 37.81                   | 28.766             |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Weatherford International Ltd.

## Anticollision Report



|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-511CS               |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5311.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | Bonanza 1023-51              | <b>MD Reference:</b>                | WELL @ 5311.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | BONANZA 1023-511CS           | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | BONANZA 1023-511CS           | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 4-28-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design Bonanza 1023-51 - BONANZA 1023-5G4DS - BONANZA 1023-5G4DS - PLAN #1 4-28-10 RHS |                     |                     |                     |                |             |  |                                      |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|---|---------------------|---------------------|---------------------|----------------|-------------|--|--------------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD   |                     |                     |                     |                |             |  |                                      |            |                      |                       |                         | Offset Well Error: | 0.00 ft |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Semi Major Axis<br>Highside Toolface (°) | Offset Wellbore Centre<br>+N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 6,300.00  | 6,183.86            | 6,345.74            | 6,183.86            | 19.20          | 23.96       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,049.62              | 38.11                   | 28.539             |         |
| 6,400.00  | 6,283.86            | 6,445.74            | 6,283.86            | 19.35          | 24.08       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,049.32              | 38.42                   | 28.314             |         |
| 6,500.00  | 6,383.86            | 6,545.74            | 6,383.86            | 19.50          | 24.20       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,049.01              | 38.72                   | 28.091             |         |
| 6,600.00  | 6,483.86            | 6,645.74            | 6,483.86            | 19.66          | 24.33       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,048.71              | 39.03                   | 27.869             |         |
| 6,700.00  | 6,583.86            | 6,745.74            | 6,583.86            | 19.82          | 24.45       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,048.39              | 39.34                   | 27.649             |         |
| 6,800.00  | 6,683.86            | 6,845.74            | 6,683.86            | 19.97          | 24.58       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,048.08              | 39.65                   | 27.430             |         |
| 6,900.00  | 6,783.86            | 6,945.74            | 6,783.86            | 20.13          | 24.71       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,047.76              | 39.97                   | 27.213             |         |
| 7,000.00  | 6,883.86            | 7,045.74            | 6,883.86            | 20.29          | 24.84       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,047.45              | 40.29                   | 26.998             |         |
| 7,100.00  | 6,983.86            | 7,145.74            | 6,983.86            | 20.46          | 24.97       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,047.12              | 40.61                   | 26.784             |         |
| 7,200.00  | 7,083.86            | 7,245.74            | 7,083.86            | 20.62          | 25.10       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,046.80              | 40.94                   | 26.572             |         |
| 7,300.00  | 7,183.86            | 7,345.74            | 7,183.86            | 20.78          | 25.23       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,046.47              | 41.26                   | 26.362             |         |
| 7,400.00  | 7,283.86            | 7,445.74            | 7,283.86            | 20.95          | 25.37       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,046.15              | 41.59                   | 26.154             |         |
| 7,500.00  | 7,383.86            | 7,545.74            | 7,383.86            | 21.12          | 25.50       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,045.82              | 41.92                   | 25.948             |         |
| 7,600.00  | 7,483.86            | 7,645.74            | 7,483.86            | 21.28          | 25.64       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,045.48              | 42.25                   | 25.743             |         |
| 7,700.00  | 7,583.86            | 7,745.74            | 7,583.86            | 21.45          | 25.78       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,045.15              | 42.59                   | 25.541             |         |
| 7,800.00  | 7,683.86            | 7,845.74            | 7,683.86            | 21.62          | 25.92       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,044.81              | 42.92                   | 25.340             |         |
| 7,900.00  | 7,783.86            | 7,945.74            | 7,783.86            | 21.79          | 26.06       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,044.47              | 43.26                   | 25.142             |         |
| 8,000.00  | 7,883.86            | 8,045.74            | 7,883.86            | 21.96          | 26.20       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,044.13              | 43.61                   | 24.945             |         |
| 8,100.00  | 7,983.86            | 8,145.74            | 7,983.86            | 22.14          | 26.35       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,043.79              | 43.95                   | 24.750             |         |
| 8,200.00  | 8,083.86            | 8,245.74            | 8,083.86            | 22.31          | 26.49       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,043.44              | 44.29                   | 24.558             |         |
| 8,300.00  | 8,183.86            | 8,345.74            | 8,183.86            | 22.48          | 26.64       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,043.10              | 44.64                   | 24.367             |         |
| 8,400.00  | 8,283.86            | 8,445.74            | 8,283.86            | 22.66          | 26.78       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,042.75              | 44.99                   | 24.178             |         |
| 8,486.14  | 8,370.00            | 8,531.88            | 8,370.00            | 22.81          | 26.91       | -62.31                                   | 1,014.00                             | -392.58    | 1,087.74             | 1,042.45              | 45.29                   | 24.017             |         |

|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-511CS               |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5311.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | Bonanza 1023-51              | <b>MD Reference:</b>                | WELL @ 5311.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | BONANZA 1023-511CS           | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | BONANZA 1023-511CS           | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 4-28-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design Bonanza 1023-51 - BONANZA 1023-511BS - BONANZA 1023-511BS - PLAN #1 4-28-10 RHS |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD   |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.00 ft |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         |                    | Warning |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  |         |
| 0.00  | 0.00                | 0.00                | 0.00                | 0.00            | 0.00        | -118.59               | -4.73                             | -8.69      | 9.89                 |                       |                         |                    |         |
| 100.00  | 100.00              | 100.00              | 100.00              | 0.10            | 0.10        | -118.59               | -4.73                             | -8.69      | 9.89                 | 9.69                  | 0.20                    | 48.371             |         |
| 200.00  | 200.00              | 200.00              | 200.00              | 0.33            | 0.33        | -118.59               | -4.73                             | -8.69      | 9.89                 | 9.24                  | 0.65                    | 15.126             |         |
| 300.00  | 300.00              | 300.00              | 300.00              | 0.55            | 0.55        | -118.59               | -4.73                             | -8.69      | 9.89                 | 8.79                  | 1.10                    | 8.965 CC, ES       |         |
| 400.00  | 399.95              | 400.32              | 400.30              | 0.78            | 0.78        | -166.27               | -3.34                             | -7.62      | 10.84                | 9.29                  | 1.55                    | 6.976              |         |
| 500.00  | 499.63              | 500.44              | 500.30              | 1.02            | 1.01        | -165.73               | 0.47                              | -4.69      | 14.10                | 12.09                 | 2.00                    | 7.040              |         |
| 600.00  | 598.77              | 600.11              | 599.84              | 1.28            | 1.23        | -168.32               | 4.61                              | -1.51      | 22.05                | 19.59                 | 2.46                    | 8.952              |         |
| 700.00  | 697.08              | 699.23              | 698.82              | 1.62            | 1.47        | -171.04               | 8.72                              | 1.66       | 35.16                | 32.23                 | 2.93                    | 12.000             |         |
| 800.00  | 794.31              | 797.52              | 796.97              | 2.04            | 1.70        | -173.00               | 12.80                             | 4.79       | 53.43                | 50.03                 | 3.40                    | 15.713             |         |
| 900.00  | 890.18              | 894.72              | 894.04              | 2.55            | 1.93        | -174.34               | 16.83                             | 7.89       | 76.83                | 72.96                 | 3.87                    | 19.829             |         |
| 966.55  | 953.10              | 958.67              | 957.90              | 2.94            | 2.08        | -175.00               | 19.48                             | 9.93       | 95.21                | 91.02                 | 4.19                    | 22.712             |         |
| 1,000.00  | 984.53              | 990.65              | 989.84              | 3.15            | 2.16        | -175.29               | 20.81                             | 10.95      | 105.02               | 100.66                | 4.36                    | 24.107             |         |
| 1,100.00  | 1,078.51            | 1,086.25            | 1,085.31            | 3.79            | 2.39        | -175.90               | 24.78                             | 14.00      | 134.32               | 129.47                | 4.85                    | 27.670             |         |
| 1,200.00  | 1,172.48            | 1,181.85            | 1,180.78            | 4.45            | 2.62        | -176.29               | 28.74                             | 17.05      | 163.64               | 158.28                | 5.36                    | 30.521             |         |
| 1,300.00  | 1,266.45            | 1,277.45            | 1,276.25            | 5.11            | 2.85        | -176.57               | 32.71                             | 20.10      | 192.96               | 187.09                | 5.87                    | 32.846             |         |
| 1,400.00  | 1,360.42            | 1,373.05            | 1,371.72            | 5.78            | 3.08        | -176.77               | 36.68                             | 23.15      | 222.29               | 215.90                | 6.39                    | 34.775             |         |
| 1,500.00  | 1,454.39            | 1,468.65            | 1,467.19            | 6.46            | 3.31        | -176.92               | 40.64                             | 26.20      | 251.62               | 244.70                | 6.91                    | 36.392             |         |
| 1,600.00  | 1,548.36            | 1,564.25            | 1,562.66            | 7.14            | 3.54        | -177.04               | 44.61                             | 29.25      | 280.94               | 273.51                | 7.44                    | 37.768             |         |
| 1,700.00  | 1,642.33            | 1,659.85            | 1,658.13            | 7.81            | 3.77        | -177.14               | 48.58                             | 32.30      | 310.27               | 302.31                | 7.97                    | 38.953             |         |
| 1,800.00  | 1,736.31            | 1,755.45            | 1,753.60            | 8.50            | 4.00        | -177.23               | 52.55                             | 35.34      | 339.60               | 331.11                | 8.49                    | 39.983             |         |
| 1,900.00  | 1,830.28            | 1,851.05            | 1,849.07            | 9.18            | 4.23        | -177.30               | 56.51                             | 38.39      | 368.94               | 359.91                | 9.02                    | 40.885             |         |
| 2,000.00  | 1,924.25            | 1,946.66            | 1,944.54            | 9.86            | 4.47        | -177.35               | 60.48                             | 41.44      | 398.27               | 388.71                | 9.55                    | 41.682             |         |
| 2,100.00  | 2,018.22            | 2,042.26            | 2,040.01            | 10.55           | 4.70        | -177.40               | 64.45                             | 44.49      | 427.60               | 417.51                | 10.09                   | 42.390             |         |
| 2,200.00  | 2,112.19            | 2,151.67            | 2,149.21            | 11.23           | 4.97        | -177.43               | 69.71                             | 48.54      | 456.24               | 445.59                | 10.65                   | 42.846             |         |
| 2,287.49  | 2,194.40            | 2,263.20            | 2,260.02            | 11.83           | 5.28        | -177.29               | 79.65                             | 56.18      | 476.96               | 465.78                | 11.18                   | 42.670             |         |
| 2,300.00  | 2,206.17            | 2,279.40            | 2,276.04            | 11.91           | 5.33        | -177.25               | 81.52                             | 57.62      | 479.50               | 468.25                | 11.26                   | 42.592             |         |
| 2,400.00  | 2,300.77            | 2,410.85            | 2,405.24            | 12.43           | 5.77        | -176.85               | 100.66                            | 72.33      | 494.44               | 482.55                | 11.90                   | 41.563             |         |
| 2,500.00  | 2,396.32            | 2,544.37            | 2,534.44            | 12.92           | 6.31        | -176.18               | 127.26                            | 92.78      | 499.67               | 487.11                | 12.56                   | 39.782             |         |
| 2,600.00  | 2,492.73            | 2,672.99            | 2,656.41            | 13.38           | 6.92        | -175.25               | 159.56                            | 117.61     | 495.21               | 481.98                | 13.23                   | 37.430             |         |
| 2,700.00  | 2,589.90            | 2,772.23            | 2,749.67            | 13.79           | 7.46        | -174.38               | 186.47                            | 138.29     | 485.34               | 471.52                | 13.82                   | 35.119             |         |
| 2,800.00  | 2,687.74            | 2,871.10            | 2,842.59            | 14.17           | 8.01        | -173.43               | 213.27                            | 158.90     | 472.56               | 458.16                | 14.40                   | 32.812             |         |
| 2,900.00  | 2,786.17            | 2,969.52            | 2,935.07            | 14.50           | 8.58        | -172.37               | 239.96                            | 179.41     | 456.91               | 441.93                | 14.98                   | 30.496             |         |
| 3,000.00  | 2,885.10            | 3,067.39            | 3,027.04            | 14.80           | 9.15        | -171.16               | 266.49                            | 199.80     | 438.44               | 422.88                | 15.57                   | 28.168             |         |
| 3,100.00  | 2,984.42            | 3,164.62            | 3,118.41            | 15.05           | 9.74        | -169.77               | 292.85                            | 220.07     | 417.22               | 401.06                | 16.16                   | 25.820             |         |
| 3,200.00  | 3,084.05            | 3,261.11            | 3,209.08            | 15.25           | 10.33       | -168.12               | 319.01                            | 240.18     | 393.32               | 376.54                | 16.78                   | 23.446             |         |
| 3,300.00  | 3,183.90            | 3,356.79            | 3,298.99            | 15.42           | 10.92       | -166.14               | 344.95                            | 260.12     | 366.86               | 349.43                | 17.44                   | 21.041             |         |
| 3,400.00  | 3,283.86            | 3,451.55            | 3,388.04            | 15.54           | 11.51       | -163.70               | 370.64                            | 279.87     | 338.01               | 319.84                | 18.17                   | 18.603             |         |
| 3,430.14  | 3,314.00            | 3,479.92            | 3,414.70            | 15.57           | 11.69       | -114.56               | 378.33                            | 285.78     | 328.88               | 310.47                | 18.41                   | 17.862             |         |
| 3,500.00  | 3,383.86            | 3,545.57            | 3,476.39            | 15.64           | 12.10       | -112.51               | 396.13                            | 299.46     | 307.67               | 288.61                | 19.07                   | 16.137             |         |
| 3,600.00  | 3,483.86            | 3,639.54            | 3,564.69            | 15.73           | 12.70       | -109.05               | 421.61                            | 319.04     | 278.07               | 257.93                | 20.15                   | 13.801             |         |
| 3,700.00  | 3,583.86            | 3,733.51            | 3,653.00            | 15.83           | 13.30       | -104.82               | 447.08                            | 338.63     | 249.66               | 228.21                | 21.45                   | 11.640             |         |
| 3,800.00  | 3,683.86            | 3,827.48            | 3,741.31            | 15.94           | 13.91       | -99.60                | 472.56                            | 358.21     | 222.87               | 199.84                | 23.02                   | 9.680              |         |
| 3,900.00  | 3,783.86            | 3,921.45            | 3,829.61            | 16.04           | 14.51       | -93.10                | 498.04                            | 377.80     | 198.37               | 173.45                | 24.92                   | 7.960              |         |
| 4,000.00  | 3,883.86            | 4,015.42            | 3,917.92            | 16.15           | 15.12       | -85.03                | 523.51                            | 397.38     | 177.11               | 149.98                | 27.13                   | 6.528              |         |
| 4,100.00  | 3,983.86            | 4,109.39            | 4,006.23            | 16.26           | 15.74       | -75.22                | 548.99                            | 416.97     | 160.39               | 130.88                | 29.52                   | 5.434              |         |
| 4,200.00  | 4,083.86            | 4,203.37            | 4,094.53            | 16.37           | 16.35       | -63.77                | 574.47                            | 436.55     | 149.74               | 118.02                | 31.73                   | 4.720              |         |
| 4,291.26  | 4,175.12            | 4,289.12            | 4,175.12            | 16.48           | 16.91       | -52.45                | 597.72                            | 454.42     | 146.45               | 113.26                | 33.19                   | 4.412              |         |
| 4,300.00  | 4,183.86            | 4,297.34            | 4,182.84            | 16.49           | 16.97       | -51.35                | 599.95                            | 456.13     | 146.49               | 113.19                | 33.29                   | 4.400 SF           |         |
| 4,400.00  | 4,283.86            | 4,391.31            | 4,271.14            | 16.60           | 17.58       | -39.03                | 625.42                            | 475.72     | 151.10               | 117.18                | 33.92                   | 4.455              |         |
| 4,500.00  | 4,383.86            | 4,485.28            | 4,359.45            | 16.72           | 18.20       | -27.84                | 650.90                            | 495.30     | 162.92               | 129.23                | 33.70                   | 4.835              |         |
| 4,600.00  | 4,483.86            | 4,579.25            | 4,447.76            | 16.84           | 18.82       | -18.34                | 676.38                            | 514.89     | 180.54               | 147.55                | 32.99                   | 5.472              |         |
| 4,700.00  | 4,583.86            | 4,673.22            | 4,536.06            | 16.97           | 19.45       | -10.56                | 701.85                            | 534.47     | 202.45               | 170.29                | 32.15                   | 6.296              |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-511CS               |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5311.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | Bonanza 1023-51              | <b>MD Reference:</b>                | WELL @ 5311.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | BONANZA 1023-511CS           | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | BONANZA 1023-511CS           | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 4-28-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design Bonanza 1023-51 - BONANZA 1023-511BS - BONANZA 1023-511BS - PLAN #1 4-28-10 RHS |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD   |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.00 ft |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         |                    | Warning |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  |         |
| 4,800.00  | 4,683.86            | 4,768.57            | 4,625.69            | 17.09           | 20.06       | -4.24                 | 727.64                            | 554.29     | 227.34               | 195.98                | 31.37                   | 7.248              |         |
| 4,900.00  | 4,783.86            | 4,870.12            | 4,721.98            | 17.22           | 20.58       | 0.80                  | 753.22                            | 573.96     | 252.48               | 221.80                | 30.69                   | 8.228              |         |
| 5,000.00  | 4,883.86            | 4,973.99            | 4,821.58            | 17.35           | 21.06       | 4.56                  | 776.57                            | 591.91     | 276.08               | 245.84                | 30.24                   | 9.129              |         |
| 5,100.00  | 4,983.86            | 5,079.99            | 4,924.25            | 17.48           | 21.50       | 7.38                  | 797.43                            | 607.94     | 297.42               | 267.42                | 30.00                   | 9.914              |         |
| 5,200.00  | 5,083.86            | 5,187.87            | 5,029.67            | 17.62           | 21.90       | 9.49                  | 815.56                            | 621.88     | 316.04               | 286.12                | 29.92                   | 10.564             |         |
| 5,300.00  | 5,183.86            | 5,297.37            | 5,137.49            | 17.75           | 22.26       | 11.06                 | 830.72                            | 633.54     | 331.62               | 301.67                | 29.95                   | 11.072             |         |
| 5,400.00  | 5,283.86            | 5,408.22            | 5,247.28            | 17.89           | 22.56       | 12.19                 | 842.74                            | 642.77     | 343.94               | 313.87                | 30.08                   | 11.435             |         |
| 5,500.00  | 5,383.86            | 5,520.08            | 5,358.60            | 18.03           | 22.81       | 12.96                 | 851.44                            | 649.46     | 352.85               | 322.57                | 30.28                   | 11.655             |         |
| 5,600.00  | 5,483.86            | 5,632.65            | 5,470.96            | 18.17           | 23.01       | 13.40                 | 856.71                            | 653.51     | 358.23               | 327.70                | 30.53                   | 11.734             |         |
| 5,700.00  | 5,583.86            | 5,745.56            | 5,583.84            | 18.31           | 23.15       | 13.55                 | 858.48                            | 654.87     | 360.04               | 329.20                | 30.84                   | 11.676             |         |
| 5,800.00  | 5,683.86            | 5,845.58            | 5,683.86            | 18.45           | 23.26       | 13.55                 | 858.48                            | 654.87     | 360.04               | 328.87                | 31.17                   | 11.552             |         |
| 5,900.00  | 5,783.86            | 5,945.58            | 5,783.86            | 18.60           | 23.38       | 13.55                 | 858.48                            | 654.87     | 360.04               | 328.53                | 31.51                   | 11.426             |         |
| 6,000.00  | 5,883.86            | 6,045.58            | 5,883.86            | 18.75           | 23.49       | 13.55                 | 858.48                            | 654.87     | 360.04               | 328.18                | 31.85                   | 11.303             |         |
| 6,100.00  | 5,983.86            | 6,145.58            | 5,983.86            | 18.89           | 23.61       | 13.55                 | 858.48                            | 654.87     | 360.04               | 327.84                | 32.20                   | 11.181             |         |
| 6,200.00  | 6,083.86            | 6,245.58            | 6,083.86            | 19.04           | 23.72       | 13.55                 | 858.48                            | 654.87     | 360.04               | 327.49                | 32.55                   | 11.061             |         |
| 6,300.00  | 6,183.86            | 6,345.58            | 6,183.86            | 19.20           | 23.84       | 13.55                 | 858.48                            | 654.87     | 360.04               | 327.14                | 32.90                   | 10.943             |         |
| 6,400.00  | 6,283.86            | 6,445.58            | 6,283.86            | 19.35           | 23.96       | 13.55                 | 858.48                            | 654.87     | 360.04               | 326.78                | 33.26                   | 10.826             |         |
| 6,500.00  | 6,383.86            | 6,545.58            | 6,383.86            | 19.50           | 24.09       | 13.55                 | 858.48                            | 654.87     | 360.04               | 326.43                | 33.61                   | 10.712             |         |
| 6,600.00  | 6,483.86            | 6,645.58            | 6,483.86            | 19.66           | 24.21       | 13.55                 | 858.48                            | 654.87     | 360.04               | 326.07                | 33.97                   | 10.599             |         |
| 6,700.00  | 6,583.86            | 6,745.58            | 6,583.86            | 19.82           | 24.34       | 13.55                 | 858.48                            | 654.87     | 360.04               | 325.71                | 34.33                   | 10.487             |         |
| 6,800.00  | 6,683.86            | 6,845.58            | 6,683.86            | 19.97           | 24.46       | 13.55                 | 858.48                            | 654.87     | 360.04               | 325.34                | 34.69                   | 10.378             |         |
| 6,900.00  | 6,783.86            | 6,945.58            | 6,783.86            | 20.13           | 24.59       | 13.55                 | 858.48                            | 654.87     | 360.04               | 324.98                | 35.06                   | 10.270             |         |
| 7,000.00  | 6,883.86            | 7,045.58            | 6,883.86            | 20.29           | 24.72       | 13.55                 | 858.48                            | 654.87     | 360.04               | 324.61                | 35.42                   | 10.163             |         |
| 7,100.00  | 6,983.86            | 7,145.58            | 6,983.86            | 20.46           | 24.85       | 13.55                 | 858.48                            | 654.87     | 360.04               | 324.24                | 35.79                   | 10.059             |         |
| 7,200.00  | 7,083.86            | 7,245.58            | 7,083.86            | 20.62           | 24.99       | 13.55                 | 858.48                            | 654.87     | 360.04               | 323.87                | 36.16                   | 9.956              |         |
| 7,300.00  | 7,183.86            | 7,345.58            | 7,183.86            | 20.78           | 25.12       | 13.55                 | 858.48                            | 654.87     | 360.04               | 323.50                | 36.54                   | 9.854              |         |
| 7,400.00  | 7,283.86            | 7,445.58            | 7,283.86            | 20.95           | 25.25       | 13.55                 | 858.48                            | 654.87     | 360.04               | 323.13                | 36.91                   | 9.755              |         |
| 7,500.00  | 7,383.86            | 7,545.58            | 7,383.86            | 21.12           | 25.39       | 13.55                 | 858.48                            | 654.87     | 360.04               | 322.75                | 37.29                   | 9.656              |         |
| 7,600.00  | 7,483.86            | 7,645.58            | 7,483.86            | 21.28           | 25.53       | 13.55                 | 858.48                            | 654.87     | 360.04               | 322.38                | 37.66                   | 9.560              |         |
| 7,700.00  | 7,583.86            | 7,745.58            | 7,583.86            | 21.45           | 25.67       | 13.55                 | 858.48                            | 654.87     | 360.04               | 322.00                | 38.04                   | 9.464              |         |
| 7,800.00  | 7,683.86            | 7,845.58            | 7,683.86            | 21.62           | 25.81       | 13.55                 | 858.48                            | 654.87     | 360.04               | 321.62                | 38.42                   | 9.371              |         |
| 7,900.00  | 7,783.86            | 7,945.58            | 7,783.86            | 21.79           | 25.95       | 13.55                 | 858.48                            | 654.87     | 360.04               | 321.24                | 38.80                   | 9.279              |         |
| 8,000.00  | 7,883.86            | 8,045.58            | 7,883.86            | 21.96           | 26.09       | 13.55                 | 858.48                            | 654.87     | 360.04               | 320.85                | 39.19                   | 9.188              |         |
| 8,100.00  | 7,983.86            | 8,145.58            | 7,983.86            | 22.14           | 26.23       | 13.55                 | 858.48                            | 654.87     | 360.04               | 320.47                | 39.57                   | 9.099              |         |
| 8,200.00  | 8,083.86            | 8,245.58            | 8,083.86            | 22.31           | 26.38       | 13.55                 | 858.48                            | 654.87     | 360.04               | 320.08                | 39.96                   | 9.011              |         |
| 8,300.00  | 8,183.86            | 8,345.58            | 8,183.86            | 22.48           | 26.52       | 13.55                 | 858.48                            | 654.87     | 360.04               | 319.69                | 40.34                   | 8.924              |         |
| 8,400.00  | 8,283.86            | 8,445.58            | 8,283.86            | 22.66           | 26.67       | 13.55                 | 858.48                            | 654.87     | 360.04               | 319.31                | 40.73                   | 8.839              |         |
| 8,486.14  | 8,370.00            | 8,531.71            | 8,370.00            | 22.81           | 26.80       | 13.55                 | 858.48                            | 654.87     | 360.04               | 318.97                | 41.07                   | 8.767              |         |



# Weatherford International Ltd.

## Anticollision Report



|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-511CS               |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5311.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | Bonanza 1023-51              | <b>MD Reference:</b>                | WELL @ 5311.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | BONANZA 1023-511CS           | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | BONANZA 1023-511CS           | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 4-28-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design Bonanza 1023-51 - BONANZA 1023-514BS - BONANZA 1023-514BS - PLAN #1 4-28-10 RHS |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD   |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.00 ft |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         |                    | Warning |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  |         |
| 0.00  | 0.00                | 0.00                | 0.00                | 0.00            | 0.00        | 61.41                 | 4.73                              | 8.69       | 9.89                 |                       |                         |                    |         |
| 100.00  | 100.00              | 100.00              | 100.00              | 0.10            | 0.10        | 61.41                 | 4.73                              | 8.69       | 9.89                 | 9.69                  | 0.20                    | 49.737             |         |
| 200.00  | 200.00              | 200.00              | 200.00              | 0.33            | 0.32        | 61.41                 | 4.73                              | 8.69       | 9.89                 | 9.25                  | 0.65                    | 15.257             |         |
| 300.00  | 300.00              | 300.00              | 300.00              | 0.55            | 0.55        | 61.41                 | 4.73                              | 8.69       | 9.89                 | 8.80                  | 1.10                    | 9.011              |         |
| 371.97  | 371.96              | 371.62              | 371.60              | 0.71            | 0.70        | 17.76                 | 4.90                              | 10.02      | 9.86                 | 8.44                  | 1.42                    | 6.956 CC           |         |
| 400.00  | 399.95              | 399.50              | 399.45              | 0.78            | 0.76        | 22.08                 | 5.05                              | 11.26      | 9.89                 | 8.35                  | 1.54                    | 6.431 ES           |         |
| 500.00  | 499.63              | 498.85              | 498.49              | 1.02            | 0.99        | 46.31                 | 6.01                              | 18.95      | 11.24                | 9.26                  | 1.98                    | 5.682 SF           |         |
| 600.00  | 598.77              | 597.92              | 596.72              | 1.28            | 1.26        | 70.52                 | 7.59                              | 31.70      | 16.41                | 13.91                 | 2.50                    | 6.571              |         |
| 700.00  | 697.08              | 696.58              | 693.73              | 1.62            | 1.60        | 84.83                 | 9.78                              | 49.40      | 25.84                | 22.68                 | 3.16                    | 8.179              |         |
| 800.00  | 794.31              | 794.69              | 789.18              | 2.04            | 2.02        | 92.37                 | 12.57                             | 71.91      | 38.92                | 34.94                 | 3.98                    | 9.788              |         |
| 900.00  | 890.18              | 892.99              | 883.85              | 2.55            | 2.51        | 97.71                 | 15.83                             | 98.15      | 54.72                | 49.77                 | 4.95                    | 11.051             |         |
| 966.55  | 953.10              | 958.38              | 946.79              | 2.94            | 2.86        | 102.05                | 18.01                             | 115.76     | 66.04                | 60.37                 | 5.67                    | 11.643             |         |
| 1,000.00  | 984.53              | 991.19              | 978.37              | 3.15            | 3.03        | 104.29                | 19.11                             | 124.60     | 71.99                | 65.95                 | 6.04                    | 11.911             |         |
| 1,100.00  | 1,078.51            | 1,089.27            | 1,072.77            | 3.79            | 3.57        | 109.21                | 22.38                             | 151.01     | 90.26                | 83.10                 | 7.16                    | 12.602             |         |
| 1,200.00  | 1,172.48            | 1,187.35            | 1,167.17            | 4.45            | 4.11        | 112.47                | 25.65                             | 177.41     | 108.96               | 100.68                | 8.28                    | 13.155             |         |
| 1,300.00  | 1,266.45            | 1,285.43            | 1,261.57            | 5.11            | 4.65        | 114.77                | 28.93                             | 203.82     | 127.90               | 118.49                | 9.41                    | 13.598             |         |
| 1,400.00  | 1,360.42            | 1,383.51            | 1,355.98            | 5.78            | 5.20        | 116.47                | 32.20                             | 230.23     | 146.98               | 136.45                | 10.53                   | 13.959             |         |
| 1,500.00  | 1,454.39            | 1,481.59            | 1,450.38            | 6.46            | 5.75        | 117.79                | 35.48                             | 256.64     | 166.17               | 154.51                | 11.66                   | 14.256             |         |
| 1,600.00  | 1,548.36            | 1,579.67            | 1,544.78            | 7.14            | 6.31        | 118.83                | 38.75                             | 283.05     | 185.42               | 172.63                | 12.78                   | 14.505             |         |
| 1,700.00  | 1,642.33            | 1,677.75            | 1,639.18            | 7.81            | 6.86        | 119.67                | 42.03                             | 309.46     | 204.71               | 190.80                | 13.91                   | 14.716             |         |
| 1,800.00  | 1,736.31            | 1,775.83            | 1,733.58            | 8.50            | 7.42        | 120.37                | 45.30                             | 335.87     | 224.04               | 209.00                | 15.04                   | 14.896             |         |
| 1,900.00  | 1,830.28            | 1,873.91            | 1,827.98            | 9.18            | 7.97        | 120.96                | 48.57                             | 362.28     | 243.40               | 227.23                | 16.17                   | 15.052             |         |
| 2,000.00  | 1,924.25            | 1,971.99            | 1,922.38            | 9.86            | 8.53        | 121.46                | 51.85                             | 388.69     | 262.78               | 245.48                | 17.30                   | 15.189             |         |
| 2,100.00  | 2,018.22            | 2,070.07            | 2,016.78            | 10.55           | 9.09        | 121.90                | 55.12                             | 415.10     | 282.18               | 263.75                | 18.43                   | 15.309             |         |
| 2,200.00  | 2,112.19            | 2,168.19            | 2,111.25            | 11.23           | 9.63        | 122.30                | 58.38                             | 441.38     | 301.59               | 282.05                | 19.54                   | 15.434             |         |
| 2,287.49  | 2,194.40            | 2,253.99            | 2,194.34            | 11.83           | 10.00       | 122.94                | 61.02                             | 462.63     | 318.57               | 298.18                | 20.40                   | 15.620             |         |
| 2,300.00  | 2,206.17            | 2,266.25            | 2,206.26            | 11.91           | 10.05       | 123.10                | 61.37                             | 465.49     | 320.99               | 300.49                | 20.50                   | 15.655             |         |
| 2,400.00  | 2,300.77            | 2,364.31            | 2,301.94            | 12.43           | 10.43       | 124.28                | 64.01                             | 486.77     | 339.46               | 318.19                | 21.27                   | 15.960             |         |
| 2,500.00  | 2,396.32            | 2,462.47            | 2,398.32            | 12.92           | 10.76       | 125.41                | 66.30                             | 505.22     | 356.35               | 334.39                | 21.96                   | 16.224             |         |
| 2,600.00  | 2,492.73            | 2,560.70            | 2,495.28            | 13.38           | 11.06       | 126.51                | 68.23                             | 520.80     | 371.68               | 349.10                | 22.58                   | 16.459             |         |
| 2,700.00  | 2,589.90            | 2,658.94            | 2,592.69            | 13.79           | 11.33       | 127.59                | 69.80                             | 533.48     | 385.44               | 362.32                | 23.12                   | 16.671             |         |
| 2,800.00  | 2,687.74            | 2,757.17            | 2,690.41            | 14.17           | 11.55       | 128.67                | 71.01                             | 543.26     | 397.64               | 374.06                | 23.58                   | 16.867             |         |
| 2,900.00  | 2,786.17            | 2,855.33            | 2,788.33            | 14.50           | 11.74       | 129.75                | 71.87                             | 550.13     | 408.27               | 384.33                | 23.95                   | 17.050             |         |
| 3,000.00  | 2,885.10            | 2,953.38            | 2,886.29            | 14.80           | 11.89       | 130.85                | 72.35                             | 554.07     | 417.36               | 393.13                | 24.23                   | 17.224             |         |
| 3,100.00  | 2,984.42            | 3,051.52            | 2,984.42            | 15.05           | 12.01       | 131.97                | 72.49                             | 555.13     | 424.92               | 400.48                | 24.44                   | 17.388             |         |
| 3,200.00  | 3,084.05            | 3,151.15            | 3,084.05            | 15.25           | 12.12       | 132.88                | 72.49                             | 555.13     | 430.70               | 406.08                | 24.62                   | 17.495             |         |
| 3,300.00  | 3,183.90            | 3,250.99            | 3,183.90            | 15.42           | 12.23       | 133.46                | 72.49                             | 555.13     | 434.46               | 409.66                | 24.81                   | 17.513             |         |
| 3,400.00  | 3,283.86            | 3,350.96            | 3,283.86            | 15.54           | 12.35       | 133.72                | 72.49                             | 555.13     | 436.15               | 411.15                | 25.01                   | 17.442             |         |
| 3,430.14  | 3,314.00            | 3,381.10            | 3,314.00            | 15.57           | 12.39       | -177.98               | 72.49                             | 555.13     | 436.25               | 411.18                | 25.07                   | 17.403             |         |
| 3,500.00  | 3,383.86            | 3,450.96            | 3,383.86            | 15.64           | 12.48       | -177.98               | 72.49                             | 555.13     | 436.25               | 411.02                | 25.23                   | 17.290             |         |
| 3,600.00  | 3,483.86            | 3,550.96            | 3,483.86            | 15.73           | 12.60       | -177.98               | 72.49                             | 555.13     | 436.25               | 410.77                | 25.48                   | 17.123             |         |
| 3,700.00  | 3,583.86            | 3,650.96            | 3,583.86            | 15.83           | 12.73       | -177.98               | 72.49                             | 555.13     | 436.25               | 410.52                | 25.73                   | 16.956             |         |
| 3,800.00  | 3,683.86            | 3,750.96            | 3,683.86            | 15.94           | 12.86       | -177.98               | 72.49                             | 555.13     | 436.25               | 410.26                | 25.98                   | 16.789             |         |
| 3,900.00  | 3,783.86            | 3,850.96            | 3,783.86            | 16.04           | 12.99       | -177.98               | 72.49                             | 555.13     | 436.25               | 410.00                | 26.25                   | 16.622             |         |
| 4,000.00  | 3,883.86            | 3,950.96            | 3,883.86            | 16.15           | 13.13       | -177.98               | 72.49                             | 555.13     | 436.25               | 409.74                | 26.51                   | 16.454             |         |
| 4,100.00  | 3,983.86            | 4,050.96            | 3,983.86            | 16.26           | 13.27       | -177.98               | 72.49                             | 555.13     | 436.25               | 409.46                | 26.78                   | 16.288             |         |
| 4,200.00  | 4,083.86            | 4,150.96            | 4,083.86            | 16.37           | 13.41       | -177.98               | 72.49                             | 555.13     | 436.25               | 409.19                | 27.06                   | 16.121             |         |
| 4,300.00  | 4,183.86            | 4,250.96            | 4,183.86            | 16.49           | 13.55       | -177.98               | 72.49                             | 555.13     | 436.25               | 408.91                | 27.34                   | 15.956             |         |
| 4,400.00  | 4,283.86            | 4,350.96            | 4,283.86            | 16.60           | 13.70       | -177.98               | 72.49                             | 555.13     | 436.25               | 408.62                | 27.63                   | 15.791             |         |
| 4,500.00  | 4,383.86            | 4,450.96            | 4,383.86            | 16.72           | 13.85       | -177.98               | 72.49                             | 555.13     | 436.25               | 408.33                | 27.92                   | 15.627             |         |
| 4,600.00  | 4,483.86            | 4,550.96            | 4,483.86            | 16.84           | 14.00       | -177.98               | 72.49                             | 555.13     | 436.25               | 408.04                | 28.21                   | 15.464             |         |
| 4,700.00  | 4,583.86            | 4,650.96            | 4,583.86            | 16.97           | 14.15       | -177.98               | 72.49                             | 555.13     | 436.25               | 407.74                | 28.51                   | 15.303             |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation





# Weatherford International Ltd.

## Anticollision Report



|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-511CS               |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5311.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | Bonanza 1023-51              | <b>MD Reference:</b>                | WELL @ 5311.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | BONANZA 1023-511CS           | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | BONANZA 1023-511CS           | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 4-28-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design Bonanza 1023-51 - BONANZA 1023-514BS - BONANZA 1023-514BS - PLAN #1 4-28-10 RHS |                               |                            |                            |                |             |                                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|---|-------------------------------|----------------------------|----------------------------|----------------|-------------|---------------------------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD   |                               |                            |                            |                |             |                                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.00 ft |
| Measured Depth (ft)   | Reference Vertical Depth (ft) | Offset Measured Depth (ft) | Offset Vertical Depth (ft) | Reference (ft) | Offset (ft) | Semi Major Axis Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 4,800.00  | 4,683.86                      | 4,750.96                   | 4,683.86                   | 17.09          | 14.30       | -177.98                               | 72.49                             | 555.13     | 436.25               | 407.44                | 28.81                   | 15.142             |         |
| 4,900.00  | 4,783.86                      | 4,850.96                   | 4,783.86                   | 17.22          | 14.46       | -177.98                               | 72.49                             | 555.13     | 436.25               | 407.13                | 29.12                   | 14.984             |         |
| 5,000.00  | 4,883.86                      | 4,950.96                   | 4,883.86                   | 17.35          | 14.61       | -177.98                               | 72.49                             | 555.13     | 436.25               | 406.82                | 29.42                   | 14.826             |         |
| 5,100.00  | 4,983.86                      | 5,050.96                   | 4,983.86                   | 17.48          | 14.77       | -177.98                               | 72.49                             | 555.13     | 436.25               | 406.51                | 29.74                   | 14.670             |         |
| 5,200.00  | 5,083.86                      | 5,150.96                   | 5,083.86                   | 17.62          | 14.93       | -177.98                               | 72.49                             | 555.13     | 436.25               | 406.19                | 30.05                   | 14.516             |         |
| 5,300.00  | 5,183.86                      | 5,250.96                   | 5,183.86                   | 17.75          | 15.09       | -177.98                               | 72.49                             | 555.13     | 436.25               | 405.87                | 30.37                   | 14.363             |         |
| 5,400.00  | 5,283.86                      | 5,350.96                   | 5,283.86                   | 17.89          | 15.26       | -177.98                               | 72.49                             | 555.13     | 436.25               | 405.55                | 30.70                   | 14.212             |         |
| 5,500.00  | 5,383.86                      | 5,450.96                   | 5,383.86                   | 18.03          | 15.42       | -177.98                               | 72.49                             | 555.13     | 436.25               | 405.22                | 31.02                   | 14.062             |         |
| 5,600.00  | 5,483.86                      | 5,550.96                   | 5,483.86                   | 18.17          | 15.59       | -177.98                               | 72.49                             | 555.13     | 436.25               | 404.90                | 31.35                   | 13.915             |         |
| 5,700.00  | 5,583.86                      | 5,650.96                   | 5,583.86                   | 18.31          | 15.76       | -177.98                               | 72.49                             | 555.13     | 436.25               | 404.56                | 31.68                   | 13.769             |         |
| 5,800.00  | 5,683.86                      | 5,750.96                   | 5,683.86                   | 18.45          | 15.93       | -177.98                               | 72.49                             | 555.13     | 436.25               | 404.23                | 32.02                   | 13.625             |         |
| 5,900.00  | 5,783.86                      | 5,850.96                   | 5,783.86                   | 18.60          | 16.10       | -177.98                               | 72.49                             | 555.13     | 436.25               | 403.89                | 32.36                   | 13.482             |         |
| 6,000.00  | 5,883.86                      | 5,950.96                   | 5,883.86                   | 18.75          | 16.27       | -177.98                               | 72.49                             | 555.13     | 436.25               | 403.55                | 32.70                   | 13.342             |         |
| 6,100.00  | 5,983.86                      | 6,050.96                   | 5,983.86                   | 18.89          | 16.44       | -177.98                               | 72.49                             | 555.13     | 436.25               | 403.21                | 33.04                   | 13.204             |         |
| 6,200.00  | 6,083.86                      | 6,150.96                   | 6,083.86                   | 19.04          | 16.62       | -177.98                               | 72.49                             | 555.13     | 436.25               | 402.86                | 33.39                   | 13.067             |         |
| 6,300.00  | 6,183.86                      | 6,250.96                   | 6,183.86                   | 19.20          | 16.79       | -177.98                               | 72.49                             | 555.13     | 436.25               | 402.51                | 33.73                   | 12.932             |         |
| 6,400.00  | 6,283.86                      | 6,350.96                   | 6,283.86                   | 19.35          | 16.97       | -177.98                               | 72.49                             | 555.13     | 436.25               | 402.16                | 34.08                   | 12.799             |         |
| 6,500.00  | 6,383.86                      | 6,450.96                   | 6,383.86                   | 19.50          | 17.15       | -177.98                               | 72.49                             | 555.13     | 436.25               | 401.81                | 34.44                   | 12.668             |         |
| 6,600.00  | 6,483.86                      | 6,550.96                   | 6,483.86                   | 19.66          | 17.33       | -177.98                               | 72.49                             | 555.13     | 436.25               | 401.46                | 34.79                   | 12.539             |         |
| 6,700.00  | 6,583.86                      | 6,650.96                   | 6,583.86                   | 19.82          | 17.51       | -177.98                               | 72.49                             | 555.13     | 436.25               | 401.10                | 35.15                   | 12.411             |         |
| 6,800.00  | 6,683.86                      | 6,750.96                   | 6,683.86                   | 19.97          | 17.69       | -177.98                               | 72.49                             | 555.13     | 436.25               | 400.74                | 35.51                   | 12.286             |         |
| 6,900.00  | 6,783.86                      | 6,850.96                   | 6,783.86                   | 20.13          | 17.87       | -177.98                               | 72.49                             | 555.13     | 436.25               | 400.38                | 35.87                   | 12.162             |         |
| 7,000.00  | 6,883.86                      | 6,950.96                   | 6,883.86                   | 20.29          | 18.06       | -177.98                               | 72.49                             | 555.13     | 436.25               | 400.01                | 36.23                   | 12.040             |         |
| 7,100.00  | 6,983.86                      | 7,050.96                   | 6,983.86                   | 20.46          | 18.24       | -177.98                               | 72.49                             | 555.13     | 436.25               | 399.65                | 36.60                   | 11.920             |         |
| 7,200.00  | 7,083.86                      | 7,150.96                   | 7,083.86                   | 20.62          | 18.43       | -177.98                               | 72.49                             | 555.13     | 436.25               | 399.28                | 36.96                   | 11.802             |         |
| 7,300.00  | 7,183.86                      | 7,250.96                   | 7,183.86                   | 20.78          | 18.61       | -177.98                               | 72.49                             | 555.13     | 436.25               | 398.91                | 37.33                   | 11.685             |         |
| 7,400.00  | 7,283.86                      | 7,350.96                   | 7,283.86                   | 20.95          | 18.80       | -177.98                               | 72.49                             | 555.13     | 436.25               | 398.54                | 37.70                   | 11.570             |         |
| 7,500.00  | 7,383.86                      | 7,450.96                   | 7,383.86                   | 21.12          | 18.99       | -177.98                               | 72.49                             | 555.13     | 436.25               | 398.17                | 38.08                   | 11.457             |         |
| 7,600.00  | 7,483.86                      | 7,550.96                   | 7,483.86                   | 21.28          | 19.18       | -177.98                               | 72.49                             | 555.13     | 436.25               | 397.80                | 38.45                   | 11.346             |         |
| 7,700.00  | 7,583.86                      | 7,650.96                   | 7,583.86                   | 21.45          | 19.36       | -177.98                               | 72.49                             | 555.13     | 436.25               | 397.42                | 38.83                   | 11.236             |         |
| 7,800.00  | 7,683.86                      | 7,750.96                   | 7,683.86                   | 21.62          | 19.55       | -177.98                               | 72.49                             | 555.13     | 436.25               | 397.04                | 39.20                   | 11.128             |         |
| 7,900.00  | 7,783.86                      | 7,850.96                   | 7,783.86                   | 21.79          | 19.75       | -177.98                               | 72.49                             | 555.13     | 436.25               | 396.67                | 39.58                   | 11.022             |         |
| 8,000.00  | 7,883.86                      | 7,950.96                   | 7,883.86                   | 21.96          | 19.94       | -177.98                               | 72.49                             | 555.13     | 436.25               | 396.29                | 39.96                   | 10.917             |         |
| 8,100.00  | 7,983.86                      | 8,050.96                   | 7,983.86                   | 22.14          | 20.13       | -177.98                               | 72.49                             | 555.13     | 436.25               | 395.90                | 40.34                   | 10.814             |         |
| 8,200.00  | 8,083.86                      | 8,150.96                   | 8,083.86                   | 22.31          | 20.32       | -177.98                               | 72.49                             | 555.13     | 436.25               | 395.52                | 40.73                   | 10.712             |         |
| 8,300.00  | 8,183.86                      | 8,250.96                   | 8,183.86                   | 22.48          | 20.51       | -177.98                               | 72.49                             | 555.13     | 436.25               | 395.14                | 41.11                   | 10.612             |         |
| 8,400.00  | 8,283.86                      | 8,350.96                   | 8,283.86                   | 22.66          | 20.71       | -177.98                               | 72.49                             | 555.13     | 436.25               | 394.75                | 41.50                   | 10.513             |         |
| 8,452.32  | 8,336.18                      | 8,403.28                   | 8,336.18                   | 22.75          | 20.81       | -177.98                               | 72.49                             | 555.13     | 436.25               | 394.55                | 41.70                   | 10.462             |         |
| 8,486.14  | 8,370.00                      | 8,424.10                   | 8,357.00                   | 22.81          | 20.85       | -177.98                               | 72.49                             | 555.13     | 436.44               | 394.64                | 41.80                   | 10.440             |         |



# Weatherford International Ltd.

## Anticollision Report



|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-51CS                |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5311.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | Bonanza 1023-51              | <b>MD Reference:</b>                | WELL @ 5311.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | BONANZA 1023-51CS            | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | BONANZA 1023-51CS            | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 4-28-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design         |                     | Bonanza 1023-5I - BONANZA 1023-5J3AS - BONANZA 1023-5J3AS - PLAN #1 4-28-10 RHS |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Site Error: | 0.00 ft |
|-----------------------|---------------------|---|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 0-MWD |                     |   |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Well Error: | 0.00 ft |
| Reference             |                     | Offset  |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         |                   |                    |         |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft)   | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | Warning            |         |
| 0.00                  | 0.00                | 0.00  | 0.00                | 0.00            | 0.00        | -119.21               | -14.57                            | -26.06     | 29.86                |                       |                         |                   |                    |         |
| 100.00                | 100.00              | 100.00  | 100.00              | 0.10            | 0.10        | -119.21               | -14.57                            | -26.06     | 29.86                | 29.65                 | 0.20                    | 145.974           |                    |         |
| 200.00                | 200.00              | 200.00  | 200.00              | 0.33            | 0.33        | -119.21               | -14.57                            | -26.06     | 29.86                | 29.20                 | 0.65                    | 45.648            |                    |         |
| 300.00                | 300.00              | 300.00  | 300.00              | 0.55            | 0.55        | -119.21               | -14.57                            | -26.06     | 29.86                | 28.75                 | 1.10                    | 27.054 CC, ES     |                    |         |
| 400.00                | 399.95              | 398.98  | 398.96              | 0.78            | 0.76        | -166.85               | -14.46                            | -27.77     | 33.87                | 32.31                 | 1.55                    | 21.807 SF         |                    |         |
| 500.00                | 499.63              | 497.73  | 497.60              | 1.02            | 0.98        | -165.82               | -14.16                            | -32.47     | 45.53                | 43.51                 | 2.02                    | 22.503            |                    |         |
| 600.00                | 598.77              | 596.25  | 595.98              | 1.28            | 1.20        | -166.15               | -13.83                            | -37.62     | 62.62                | 60.13                 | 2.48                    | 25.209            |                    |         |
| 700.00                | 697.08              | 693.76  | 693.36              | 1.62            | 1.43        | -167.10               | -13.51                            | -42.71     | 84.70                | 81.75                 | 2.95                    | 28.726            |                    |         |
| 800.00                | 794.31              | 789.99  | 789.46              | 2.04            | 1.66        | -168.16               | -13.19                            | -47.74     | 111.77               | 108.35                | 3.42                    | 32.709            |                    |         |
| 900.00                | 890.18              | 884.69  | 884.02              | 2.55            | 1.89        | -169.14               | -12.88                            | -52.68     | 143.77               | 139.89                | 3.89                    | 36.972            |                    |         |
| 966.55                | 953.10              | 946.72  | 945.97              | 2.94            | 2.04        | -169.71               | -12.67                            | -55.92     | 167.78               | 163.58                | 4.20                    | 39.912            |                    |         |
| 1,000.00              | 984.53              | 977.70  | 976.90              | 3.15            | 2.11        | -170.04               | -12.57                            | -57.54     | 180.39               | 176.03                | 4.36                    | 41.333            |                    |         |
| 1,100.00              | 1,078.51            | 1,070.28  | 1,069.36            | 3.79            | 2.33        | -170.78               | -12.26                            | -62.38     | 218.10               | 213.25                | 4.85                    | 44.952            |                    |         |
| 1,200.00              | 1,172.48            | 1,162.87  | 1,161.82            | 4.45            | 2.56        | -171.31               | -11.95                            | -67.21     | 255.84               | 250.49                | 5.35                    | 47.828            |                    |         |
| 1,300.00              | 1,266.45            | 1,255.45  | 1,254.28            | 5.11            | 2.78        | -171.70               | -11.64                            | -72.05     | 293.59               | 287.74                | 5.85                    | 50.166            |                    |         |
| 1,400.00              | 1,360.42            | 1,348.04  | 1,346.74            | 5.78            | 3.01        | -172.00               | -11.34                            | -76.88     | 331.35               | 324.98                | 6.36                    | 52.068            |                    |         |
| 1,500.00              | 1,454.39            | 1,440.62  | 1,439.19            | 6.46            | 3.23        | -172.24               | -11.03                            | -81.72     | 369.11               | 362.24                | 6.88                    | 53.673            |                    |         |
| 1,600.00              | 1,548.36            | 1,533.20  | 1,531.65            | 7.14            | 3.46        | -172.44               | -10.72                            | -86.56     | 406.88               | 399.49                | 7.39                    | 55.029            |                    |         |
| 1,700.00              | 1,642.33            | 1,625.79  | 1,624.11            | 7.81            | 3.69        | -172.60               | -10.41                            | -91.39     | 444.66               | 436.74                | 7.91                    | 56.190            |                    |         |
| 1,800.00              | 1,736.31            | 1,718.37  | 1,716.57            | 8.50            | 3.91        | -172.74               | -10.11                            | -96.23     | 482.43               | 474.00                | 8.44                    | 57.193            |                    |         |
| 1,900.00              | 1,830.28            | 1,810.96  | 1,809.03            | 9.18            | 4.14        | -172.85               | -9.80                             | -101.06    | 520.21               | 511.25                | 8.96                    | 58.068            |                    |         |
| 2,000.00              | 1,924.25            | 1,903.54  | 1,901.48            | 9.86            | 4.37        | -172.95               | -9.49                             | -105.90    | 557.99               | 548.51                | 9.48                    | 58.837            |                    |         |
| 2,100.00              | 2,018.22            | 1,996.13  | 1,993.94            | 10.55           | 4.59        | -173.04               | -9.18                             | -110.73    | 595.77               | 585.76                | 10.01                   | 59.518            |                    |         |
| 2,200.00              | 2,112.19            | 2,088.71  | 2,086.40            | 11.23           | 4.82        | -173.12               | -8.87                             | -115.57    | 633.55               | 623.01                | 10.54                   | 60.124            |                    |         |
| 2,287.49              | 2,194.40            | 2,155.32  | 2,152.87            | 11.83           | 4.99        | -173.13               | -8.61                             | -119.78    | 667.33               | 656.36                | 10.98                   | 60.791            |                    |         |
| 2,300.00              | 2,206.17            | 2,164.34  | 2,161.86            | 11.91           | 5.01        | -173.13               | -8.56                             | -120.52    | 672.31               | 661.27                | 11.04                   | 60.881            |                    |         |
| 2,400.00              | 2,300.77            | 2,235.89  | 2,233.02            | 12.43           | 5.22        | -173.05               | -8.09                             | -127.90    | 712.02               | 700.47                | 11.55                   | 61.656            |                    |         |
| 2,500.00              | 2,396.32            | 2,300.00  | 2,296.51            | 12.92           | 5.41        | -172.87               | -7.53                             | -136.77    | 751.67               | 739.64                | 12.03                   | 62.489            |                    |         |
| 2,600.00              | 2,492.73            | 2,375.95  | 2,371.28            | 13.38           | 5.67        | -172.50               | -6.68                             | -150.02    | 791.14               | 778.61                | 12.54                   | 63.095            |                    |         |
| 2,700.00              | 2,589.90            | 2,444.36  | 2,438.14            | 13.79           | 5.93        | -172.08               | -5.76                             | -164.49    | 830.57               | 817.54                | 13.02                   | 63.785            |                    |         |
| 2,800.00              | 2,687.74            | 2,500.00  | 2,492.10            | 14.17           | 6.15        | -171.70               | -4.91                             | -178.01    | 870.02               | 856.57                | 13.45                   | 64.683            |                    |         |
| 2,900.00              | 2,786.17            | 2,577.76  | 2,566.80            | 14.50           | 6.51        | -171.05               | -3.54                             | -199.53    | 909.22               | 895.27                | 13.95                   | 65.165            |                    |         |
| 3,000.00              | 2,885.10            | 2,642.68  | 2,628.46            | 14.80           | 6.84        | -170.46               | -2.25                             | -219.80    | 948.50               | 934.09                | 14.40                   | 65.849            |                    |         |
| 3,100.00              | 2,984.42            | 2,722.49  | 2,703.52            | 15.05           | 7.28        | -169.67               | -0.53                             | -246.87    | 987.34               | 972.44                | 14.90                   | 66.245            |                    |         |
| 3,200.00              | 3,084.05            | 2,814.06  | 2,789.56            | 15.25           | 7.82        | -168.80               | 1.46                              | -278.13    | 1,023.90             | 1,008.47              | 15.43                   | 66.356            |                    |         |
| 3,300.00              | 3,183.90            | 2,906.56  | 2,876.49            | 15.42           | 8.37        | -167.95               | 3.46                              | -309.70    | 1,057.93             | 1,041.98              | 15.95                   | 66.347            |                    |         |
| 3,400.00              | 3,283.86            | 2,999.91  | 2,964.21            | 15.54           | 8.96        | -167.13               | 5.49                              | -341.56    | 1,089.40             | 1,072.96              | 16.45                   | 66.239            |                    |         |
| 3,430.14              | 3,314.00            | 3,028.19  | 2,990.79            | 15.57           | 9.14        | -118.59               | 6.10                              | -351.22    | 1,098.39             | 1,081.79              | 16.60                   | 66.187            |                    |         |
| 3,500.00              | 3,383.86            | 3,093.84  | 3,052.48            | 15.64           | 9.55        | -117.95               | 7.53                              | -373.63    | 1,119.01             | 1,102.04              | 16.98                   | 65.921            |                    |         |
| 3,600.00              | 3,483.86            | 3,187.81  | 3,140.78            | 15.73           | 10.16       | -117.07               | 9.57                              | -405.70    | 1,148.75             | 1,131.23              | 17.52                   | 65.558            |                    |         |
| 3,700.00              | 3,583.86            | 3,281.78  | 3,229.08            | 15.83           | 10.78       | -116.23               | 11.60                             | -437.77    | 1,178.74             | 1,160.67              | 18.07                   | 65.235            |                    |         |
| 3,800.00              | 3,683.86            | 3,375.75  | 3,317.39            | 15.94           | 11.41       | -115.44               | 13.64                             | -469.85    | 1,208.94             | 1,190.33              | 18.61                   | 64.950            |                    |         |
| 3,900.00              | 3,783.86            | 3,469.72  | 3,405.69            | 16.04           | 12.04       | -114.68               | 15.68                             | -501.92    | 1,239.36             | 1,220.20              | 19.16                   | 64.701            |                    |         |
| 4,000.00              | 3,883.86            | 3,563.69  | 3,493.99            | 16.15           | 12.68       | -113.96               | 17.72                             | -534.00    | 1,269.97             | 1,250.27              | 19.69                   | 64.484            |                    |         |
| 4,100.00              | 3,983.86            | 3,657.66  | 3,582.30            | 16.26           | 13.32       | -113.27               | 19.76                             | -566.07    | 1,300.75             | 1,280.52              | 20.23                   | 64.296            |                    |         |
| 4,200.00              | 4,083.86            | 3,751.63  | 3,670.60            | 16.37           | 13.97       | -112.61               | 21.80                             | -598.14    | 1,331.71             | 1,310.94              | 20.76                   | 64.136            |                    |         |
| 4,300.00              | 4,183.86            | 3,845.60  | 3,758.90            | 16.49           | 14.62       | -111.98               | 23.83                             | -630.22    | 1,362.81             | 1,341.52              | 21.29                   | 64.000            |                    |         |
| 4,400.00              | 4,283.86            | 3,939.57  | 3,847.20            | 16.60           | 15.27       | -111.38               | 25.87                             | -662.29    | 1,394.07             | 1,372.25              | 21.82                   | 63.885            |                    |         |
| 4,500.00              | 4,383.86            | 4,033.54  | 3,935.51            | 16.72           | 15.92       | -110.80               | 27.91                             | -694.37    | 1,425.46             | 1,403.11              | 22.35                   | 63.790            |                    |         |
| 4,600.00              | 4,483.86            | 4,127.51  | 4,023.81            | 16.84           | 16.58       | -110.25               | 29.95                             | -726.44    | 1,456.97             | 1,434.10              | 22.87                   | 63.712            |                    |         |
| 4,700.00              | 4,583.86            | 4,221.48  | 4,112.11            | 16.97           | 17.24       | -109.72               | 31.99                             | -758.51    | 1,488.61             | 1,465.22              | 23.39                   | 63.650            |                    |         |
| 4,800.00              | 4,683.86            | 4,315.45  | 4,200.41            | 17.09           | 17.90       | -109.22               | 34.03                             | -790.59    | 1,520.35             | 1,496.45              | 23.90                   | 63.602            |                    |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation





# Weatherford International Ltd.

## Anticollision Report



|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-511CS               |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5311.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | Bonanza 1023-51              | <b>MD Reference:</b>                | WELL @ 5311.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | BONANZA 1023-511CS           | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | BONANZA 1023-511CS           | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 4-28-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design Bonanza 1023-51 - BONANZA 1023-5J3AS - BONANZA 1023-5J3AS - PLAN #1 4-28-10 RHS |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD   |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.00 ft |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         |                    | Warning |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  |         |
| 4,900.00  | 4,783.86            | 4,409.42            | 4,288.72            | 17.22           | 18.57       | -108.73               | 36.06                             | -822.66    | 1,552.20             | 1,527.78              | 24.42                   | 63.565             |         |
| 5,000.00  | 4,883.86            | 4,503.39            | 4,377.02            | 17.35           | 19.23       | -108.26               | 38.10                             | -854.74    | 1,584.15             | 1,559.22              | 24.93                   | 63.539             |         |
| 5,100.00  | 4,983.86            | 4,597.35            | 4,465.32            | 17.48           | 19.90       | -107.81               | 40.14                             | -886.81    | 1,616.19             | 1,590.75              | 25.44                   | 63.523             |         |
| 5,200.00  | 5,083.86            | 4,767.05            | 4,625.90            | 17.62           | 20.89       | -107.09               | 43.62                             | -941.50    | 1,646.84             | 1,620.69              | 26.15                   | 62.982             |         |
| 5,300.00  | 5,183.86            | 4,979.39            | 4,830.89            | 17.75           | 21.83       | -106.40               | 47.12                             | -996.61    | 1,671.34             | 1,644.45              | 26.88                   | 62.167             |         |
| 5,400.00  | 5,283.86            | 5,199.21            | 5,046.80            | 17.89           | 22.57       | -105.92               | 49.72                             | -1,037.53  | 1,688.94             | 1,661.37              | 27.57                   | 61.262             |         |
| 5,500.00  | 5,383.86            | 5,424.22            | 5,270.38            | 18.03           | 23.09       | -105.64               | 51.29                             | -1,062.19  | 1,699.32             | 1,671.13              | 28.18                   | 60.295             |         |
| 5,600.00  | 5,483.86            | 5,637.87            | 5,483.86            | 18.17           | 23.38       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,673.59              | 28.71                   | 59.297             |         |
| 5,700.00  | 5,583.86            | 5,737.87            | 5,583.86            | 18.31           | 23.48       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,673.25              | 29.05                   | 58.602             |         |
| 5,800.00  | 5,683.86            | 5,837.87            | 5,683.86            | 18.45           | 23.59       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,672.90              | 29.39                   | 57.914             |         |
| 5,900.00  | 5,783.86            | 5,937.87            | 5,783.86            | 18.60           | 23.70       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,672.56              | 29.74                   | 57.237             |         |
| 6,000.00  | 5,883.86            | 6,037.87            | 5,883.86            | 18.75           | 23.82       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,672.21              | 30.09                   | 56.570             |         |
| 6,100.00  | 5,983.86            | 6,137.87            | 5,983.86            | 18.89           | 23.93       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,671.85              | 30.44                   | 55.914             |         |
| 6,200.00  | 6,083.86            | 6,237.87            | 6,083.86            | 19.04           | 24.05       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,671.50              | 30.80                   | 55.269             |         |
| 6,300.00  | 6,183.86            | 6,337.87            | 6,183.86            | 19.20           | 24.17       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,671.14              | 31.16                   | 54.634             |         |
| 6,400.00  | 6,283.86            | 6,437.87            | 6,283.86            | 19.35           | 24.29       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,670.78              | 31.52                   | 54.009             |         |
| 6,500.00  | 6,383.86            | 6,537.87            | 6,383.86            | 19.50           | 24.41       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,670.42              | 31.88                   | 53.395             |         |
| 6,600.00  | 6,483.86            | 6,637.87            | 6,483.86            | 19.66           | 24.53       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,670.05              | 32.25                   | 52.791             |         |
| 6,700.00  | 6,583.86            | 6,737.87            | 6,583.86            | 19.82           | 24.65       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,669.69              | 32.61                   | 52.197             |         |
| 6,800.00  | 6,683.86            | 6,837.87            | 6,683.86            | 19.97           | 24.78       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,669.32              | 32.98                   | 51.614             |         |
| 6,900.00  | 6,783.86            | 6,937.87            | 6,783.86            | 20.13           | 24.90       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,668.95              | 33.35                   | 51.040             |         |
| 7,000.00  | 6,883.86            | 7,037.87            | 6,883.86            | 20.29           | 25.03       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,668.57              | 33.72                   | 50.476             |         |
| 7,100.00  | 6,983.86            | 7,137.87            | 6,983.86            | 20.46           | 25.16       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,668.20              | 34.10                   | 49.922             |         |
| 7,200.00  | 7,083.86            | 7,237.87            | 7,083.86            | 20.62           | 25.29       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,667.82              | 34.48                   | 49.377             |         |
| 7,300.00  | 7,183.86            | 7,337.87            | 7,183.86            | 20.78           | 25.42       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,667.44              | 34.85                   | 48.841             |         |
| 7,400.00  | 7,283.86            | 7,437.87            | 7,283.86            | 20.95           | 25.56       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,667.06              | 35.23                   | 48.315             |         |
| 7,500.00  | 7,383.86            | 7,537.87            | 7,383.86            | 21.12           | 25.69       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,666.68              | 35.61                   | 47.798             |         |
| 7,600.00  | 7,483.86            | 7,637.87            | 7,483.86            | 21.28           | 25.83       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,666.30              | 36.00                   | 47.289             |         |
| 7,700.00  | 7,583.86            | 7,737.87            | 7,583.86            | 21.45           | 25.96       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,665.92              | 36.38                   | 46.790             |         |
| 7,800.00  | 7,683.86            | 7,837.87            | 7,683.86            | 21.62           | 26.10       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,665.53              | 36.77                   | 46.299             |         |
| 7,900.00  | 7,783.86            | 7,937.87            | 7,783.86            | 21.79           | 26.24       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,665.14              | 37.16                   | 45.816             |         |
| 8,000.00  | 7,883.86            | 8,037.87            | 7,883.86            | 21.96           | 26.38       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,664.75              | 37.54                   | 45.342             |         |
| 8,100.00  | 7,983.86            | 8,137.87            | 7,983.86            | 22.14           | 26.52       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,664.36              | 37.93                   | 44.876             |         |
| 8,200.00  | 8,083.86            | 8,237.87            | 8,083.86            | 22.31           | 26.67       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,663.97              | 38.32                   | 44.418             |         |
| 8,300.00  | 8,183.86            | 8,337.87            | 8,183.86            | 22.48           | 26.81       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,663.58              | 38.72                   | 43.967             |         |
| 8,400.00  | 8,283.86            | 8,437.87            | 8,283.86            | 22.66           | 26.96       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,663.19              | 39.11                   | 43.525             |         |
| 8,486.14  | 8,370.00            | 8,524.01            | 8,370.00            | 22.81           | 27.08       | -105.56               | 51.74                             | -1,069.35  | 1,702.30             | 1,662.85              | 39.45                   | 43.149             |         |



# Weatherford International Ltd.

## Anticollision Report



|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-511CS               |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5311.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | Bonanza 1023-51              | <b>MD Reference:</b>                | WELL @ 5311.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | BONANZA 1023-511CS           | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | BONANZA 1023-511CS           | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 4-28-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design           |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Site Error: | 0.00 ft |
|-------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 514-MWD |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Well Error: | 0.00 ft |
| Reference               |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         |                   | Warning            |         |
| Measured Depth (ft)     | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                    |         |
| 0.00                    | 0.00                | 9.00                | 9.00                | 0.00            | 0.01        | 87.21                 | 1.09                              | 22.42      | 22.44                |                       |                         |                   |                    |         |
| 100.00                  | 100.00              | 109.00              | 109.00              | 0.10            | 0.12        | 87.16                 | 1.11                              | 22.42      | 22.45                | 22.23                 | 0.22                    | 101.829           |                    |         |
| 200.00                  | 200.00              | 209.00              | 209.00              | 0.33            | 0.23        | 87.03                 | 1.17                              | 22.43      | 22.46                | 21.91                 | 0.55                    | 40.571            |                    |         |
| 300.00                  | 300.00              | 308.99              | 308.99              | 0.55            | 0.34        | 86.81                 | 1.25                              | 22.45      | 22.49                | 21.60                 | 0.89                    | 25.353            |                    |         |
| 400.00                  | 399.95              | 408.95              | 408.95              | 0.78            | 0.44        | 42.78                 | 1.37                              | 22.47      | 20.52                | 19.30                 | 1.22                    | 16.787            |                    |         |
| 500.00                  | 499.63              | 508.64              | 508.64              | 1.02            | 0.55        | 62.15                 | 1.52                              | 22.50      | 15.67                | 14.10                 | 1.57                    | 10.006            |                    |         |
| 562.28                  | 561.45              | 570.46              | 570.46              | 1.18            | 0.68        | 90.32                 | 1.63                              | 22.54      | 13.78                | 11.92                 | 1.86                    | 7.426 CC, ES      |                    |         |
| 600.00                  | 598.77              | 607.78              | 607.78              | 1.28            | 0.76        | 111.73                | 1.68                              | 22.56      | 14.83                | 12.79                 | 2.05                    | 7.245 SF          |                    |         |
| 700.00                  | 697.08              | 706.13              | 706.13              | 1.62            | 0.97        | 149.25                | 1.82                              | 22.68      | 27.29                | 24.74                 | 2.55                    | 10.696            |                    |         |
| 800.00                  | 794.31              | 803.41              | 803.41              | 2.04            | 1.18        | 163.06                | 1.94                              | 22.85      | 48.71                | 45.69                 | 3.02                    | 16.127            |                    |         |
| 900.00                  | 890.18              | 899.36              | 899.36              | 2.55            | 1.38        | 169.02                | 2.04                              | 23.08      | 76.16                | 72.67                 | 3.49                    | 21.843            |                    |         |
| 966.55                  | 953.10              | 962.35              | 962.34              | 2.94            | 1.51        | 171.27                | 2.09                              | 23.26      | 97.38                | 93.59                 | 3.80                    | 25.639            |                    |         |
| 1,000.00                | 984.53              | 993.82              | 993.82              | 3.15            | 1.58        | 172.16                | 2.11                              | 23.36      | 108.64               | 104.68                | 3.95                    | 27.493            |                    |         |
| 1,100.00                | 1,078.51            | 1,087.88            | 1,087.88            | 3.79            | 1.78        | 173.94                | 2.16                              | 23.69      | 142.36               | 137.94                | 4.42                    | 32.229            |                    |         |
| 1,200.00                | 1,172.48            | 1,181.90            | 1,181.89            | 4.45            | 1.98        | 175.00                | 2.10                              | 24.09      | 176.18               | 171.29                | 4.89                    | 36.012            |                    |         |
| 1,300.00                | 1,266.45            | 1,275.90            | 1,275.90            | 5.11            | 2.17        | 175.68                | 1.94                              | 24.56      | 210.07               | 204.69                | 5.38                    | 39.077            |                    |         |
| 1,400.00                | 1,360.42            | 1,369.86            | 1,369.85            | 5.78            | 2.37        | 176.14                | 1.67                              | 25.10      | 244.00               | 238.13                | 5.87                    | 41.602            |                    |         |
| 1,500.00                | 1,454.39            | 1,463.20            | 1,463.19            | 6.46            | 2.56        | 176.49                | 1.33                              | 25.51      | 278.08               | 271.73                | 6.35                    | 43.777            |                    |         |
| 1,600.00                | 1,548.36            | 1,556.36            | 1,556.36            | 7.14            | 2.75        | 176.80                | 0.94                              | 25.65      | 312.41               | 305.57                | 6.84                    | 45.665            |                    |         |
| 1,700.00                | 1,642.33            | 1,649.35            | 1,649.34            | 7.81            | 2.93        | 177.08                | 0.50                              | 25.50      | 346.99               | 339.65                | 7.33                    | 47.320            |                    |         |
| 1,800.00                | 1,736.31            | 1,742.73            | 1,742.72            | 8.50            | 3.12        | 177.32                | -0.01                             | 25.13      | 381.77               | 373.94                | 7.83                    | 48.760            |                    |         |
| 1,900.00                | 1,830.28            | 1,836.62            | 1,836.61            | 9.18            | 3.32        | 177.49                | -0.68                             | 24.91      | 416.55               | 408.22                | 8.33                    | 49.998            |                    |         |
| 2,000.00                | 1,924.25            | 1,928.49            | 1,928.47            | 9.86            | 3.51        | 177.60                | -1.59                             | 24.83      | 451.43               | 442.60                | 8.83                    | 51.103            |                    |         |
| 2,100.00                | 2,018.22            | 2,024.23            | 2,024.21            | 10.55           | 3.71        | 177.66                | -2.83                             | 24.86      | 486.42               | 477.08                | 9.35                    | 52.046            |                    |         |
| 2,200.00                | 2,112.19            | 2,115.20            | 2,115.16            | 11.23           | 3.91        | 177.67                | -4.11                             | 25.23      | 521.24               | 511.39                | 9.85                    | 52.906            |                    |         |
| 2,287.49                | 2,194.40            | 2,185.79            | 2,185.73            | 11.83           | 4.06        | 177.61                | -6.07                             | 25.32      | 552.68               | 542.40                | 10.28                   | 53.754            |                    |         |
| 2,300.00                | 2,206.17            | 2,194.67            | 2,194.59            | 11.91           | 4.07        | 177.60                | -6.46                             | 25.27      | 557.33               | 546.99                | 10.34                   | 53.886            |                    |         |
| 2,400.00                | 2,300.77            | 2,267.67            | 2,267.42            | 12.43           | 4.23        | 177.45                | -11.32                            | 24.22      | 594.97               | 584.16                | 10.81                   | 55.034            |                    |         |
| 2,500.00                | 2,396.32            | 2,357.07            | 2,356.47            | 12.92           | 4.43        | 177.15                | -19.14                            | 22.65      | 631.39               | 620.09                | 11.30                   | 55.865            |                    |         |
| 2,600.00                | 2,492.73            | 2,438.37            | 2,437.26            | 13.38           | 4.62        | 176.77                | -28.03                            | 21.50      | 666.21               | 654.45                | 11.76                   | 56.641            |                    |         |
| 2,700.00                | 2,589.90            | 2,519.56            | 2,517.62            | 13.79           | 4.83        | 176.23                | -39.55                            | 20.86      | 699.98               | 687.76                | 12.22                   | 57.292            |                    |         |
| 2,800.00                | 2,687.74            | 2,611.30            | 2,608.02            | 14.17           | 5.08        | 175.45                | -55.20                            | 21.18      | 732.19               | 719.50                | 12.69                   | 57.677            |                    |         |
| 2,900.00                | 2,786.17            | 2,704.02            | 2,699.28            | 14.50           | 5.33        | 174.65                | -71.58                            | 22.03      | 761.71               | 748.56                | 13.16                   | 57.900            |                    |         |
| 3,000.00                | 2,885.10            | 2,792.00            | 2,785.75            | 14.80           | 5.58        | 173.93                | -87.79                            | 22.39      | 789.33               | 775.74                | 13.59                   | 58.087            |                    |         |
| 3,100.00                | 2,984.42            | 2,891.11            | 2,883.10            | 15.05           | 5.87        | 173.14                | -106.37                           | 22.73      | 814.46               | 800.42                | 14.04                   | 58.015            |                    |         |
| 3,200.00                | 3,084.05            | 2,984.12            | 2,974.54            | 15.25           | 6.13        | 172.47                | -123.38                           | 22.70      | 836.68               | 822.24                | 14.44                   | 57.925            |                    |         |
| 3,300.00                | 3,183.90            | 3,089.66            | 3,078.47            | 15.42           | 6.45        | 171.76                | -141.75                           | 22.41      | 855.55               | 840.69                | 14.87                   | 57.554            |                    |         |
| 3,400.00                | 3,283.86            | 3,177.79            | 3,165.26            | 15.54           | 6.72        | 171.19                | -157.04                           | 21.93      | 871.73               | 856.50                | 15.22                   | 57.262            |                    |         |
| 3,430.14                | 3,314.00            | 3,201.81            | 3,188.88            | 15.57           | 6.80        | -140.66               | -161.35                           | 21.54      | 876.37               | 861.05                | 15.32                   | 57.199            |                    |         |
| 3,500.00                | 3,383.86            | 3,262.42            | 3,248.44            | 15.64           | 6.99        | -141.05               | -172.54                           | 20.01      | 887.52               | 871.91                | 15.61                   | 56.866            |                    |         |
| 3,600.00                | 3,483.86            | 3,368.31            | 3,352.45            | 15.73           | 7.35        | -141.70               | -192.19                           | 17.24      | 903.75               | 887.67                | 16.08                   | 56.208            |                    |         |
| 3,700.00                | 3,583.86            | 3,471.65            | 3,454.20            | 15.83           | 7.69        | -142.32               | -210.17                           | 15.53      | 918.52               | 901.98                | 16.54                   | 55.542            |                    |         |
| 3,800.00                | 3,683.86            | 3,567.97            | 3,549.02            | 15.94           | 7.99        | -142.81               | -226.84                           | 12.67      | 934.12               | 917.15                | 16.97                   | 55.051            |                    |         |
| 3,900.00                | 3,783.86            | 3,673.12            | 3,652.72            | 16.04           | 8.33        | -143.27               | -243.86                           | 9.22       | 949.05               | 931.63                | 17.42                   | 54.487            |                    |         |
| 4,000.00                | 3,883.86            | 3,771.25            | 3,749.51            | 16.15           | 8.65        | -143.71               | -259.77                           | 6.41       | 963.83               | 945.97                | 17.86                   | 53.970            |                    |         |
| 4,100.00                | 3,983.86            | 3,863.70            | 3,840.57            | 16.26           | 8.97        | -144.18               | -275.70                           | 4.61       | 978.97               | 960.67                | 18.30                   | 53.492            |                    |         |
| 4,200.00                | 4,083.86            | 3,965.91            | 3,940.95            | 16.37           | 9.33        | -144.81               | -294.90                           | 4.12       | 994.63               | 975.85                | 18.78                   | 52.958            |                    |         |
| 4,300.00                | 4,183.86            | 4,078.84            | 4,052.09            | 16.49           | 9.71        | -145.48               | -314.95                           | 4.15       | 1,009.27             | 989.98                | 19.29                   | 52.334            |                    |         |
| 4,400.00                | 4,283.86            | 4,156.19            | 4,128.13            | 16.60           | 9.99        | -145.96               | -329.09                           | 4.69       | 1,024.11             | 1,004.41              | 19.70                   | 51.988            |                    |         |
| 4,500.00                | 4,383.86            | 4,238.84            | 4,208.98            | 16.72           | 10.30       | -146.51               | -346.25                           | 5.11       | 1,041.17             | 1,021.04              | 20.14                   | 51.707            |                    |         |
| 4,600.00                | 4,483.86            | 4,333.06            | 4,301.14            | 16.84           | 10.65       | -147.06               | -365.75                           | 4.12       | 1,059.17             | 1,038.57              | 20.60                   | 51.423            |                    |         |
| 4,700.00                | 4,583.86            | 4,441.22            | 4,407.18            | 16.97           | 11.05       | -147.57               | -387.00                           | 1.65       | 1,077.02             | 1,055.93              | 21.08                   | 51.086            |                    |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Weatherford International Ltd.

## Anticollision Report



|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-511CS               |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5311.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | Bonanza 1023-51              | <b>MD Reference:</b>                | WELL @ 5311.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | BONANZA 1023-511CS           | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | BONANZA 1023-511CS           | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 4-28-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design           |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|-------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 514-MWD |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.00 ft |
| Reference               |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         |                    |         |
| Measured Depth (ft)     | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 4,800.00                | 4,683.86            | 4,577.62            | 4,541.50            | 17.09           | 11.51       | -148.12               | -410.44                           | -1.09      | 1,092.72             | 1,071.09              | 21.63                   | 50.519             |         |
| 4,900.00                | 4,783.86            | 4,702.30            | 4,664.98            | 17.22           | 11.89       | -148.47               | -427.52                           | -3.61      | 1,105.47             | 1,083.34              | 22.12                   | 49.970             |         |
| 5,000.00                | 4,883.86            | 4,873.76            | 4,835.66            | 17.35           | 12.34       | -148.80               | -443.18                           | -5.77      | 1,114.01             | 1,091.31              | 22.70                   | 49.070             |         |
| 5,100.00                | 4,983.86            | 4,986.99            | 4,948.72            | 17.48           | 12.59       | -148.97               | -449.38                           | -5.78      | 1,118.72             | 1,095.59              | 23.13                   | 48.357             |         |
| 5,200.00                | 5,083.86            | 5,096.11            | 5,057.78            | 17.62           | 12.81       | -149.01               | -452.89                           | -6.89      | 1,121.98             | 1,098.44              | 23.54                   | 47.655             |         |
| 5,300.00                | 5,183.86            | 5,220.46            | 5,182.08            | 17.75           | 13.05       | -149.05               | -455.89                           | -7.66      | 1,124.45             | 1,100.47              | 23.98                   | 46.890             |         |
| 5,400.00                | 5,283.86            | 5,320.91            | 5,282.52            | 17.89           | 13.23       | -149.06               | -456.63                           | -8.08      | 1,125.30             | 1,100.94              | 24.36                   | 46.189             |         |
| 5,500.00                | 5,383.86            | 5,421.39            | 5,383.00            | 18.03           | 13.41       | -149.06               | -457.49                           | -8.42      | 1,126.21             | 1,101.46              | 24.75                   | 45.504             |         |
| 5,600.00                | 5,483.86            | 5,529.85            | 5,491.46            | 18.17           | 13.59       | -149.05               | -457.82                           | -8.83      | 1,126.66             | 1,101.51              | 25.15                   | 44.798             |         |
| 5,700.00                | 5,583.86            | 5,629.71            | 5,591.33            | 18.31           | 13.77       | -149.06               | -457.96                           | -8.70      | 1,126.72             | 1,101.18              | 25.54                   | 44.121             |         |
| 5,800.00                | 5,683.86            | 5,725.36            | 5,686.97            | 18.45           | 13.93       | -149.09               | -458.59                           | -8.49      | 1,127.16             | 1,101.24              | 25.92                   | 43.489             |         |
| 5,900.00                | 5,783.86            | 5,836.38            | 5,797.99            | 18.60           | 14.12       | -149.04               | -458.20                           | -9.40      | 1,127.29             | 1,100.97              | 26.32                   | 42.830             |         |
| 6,000.00                | 5,883.86            | 5,935.43            | 5,897.02            | 18.75           | 14.29       | -149.03               | -457.45                           | -9.09      | 1,126.48             | 1,099.77              | 26.71                   | 42.179             |         |
| 6,022.00                | 5,905.86            | 5,953.45            | 5,915.05            | 18.78           | 14.32       | -149.04               | -457.50                           | -8.93      | 1,126.44             | 1,099.65              | 26.79                   | 42.052             |         |
| 6,100.00                | 5,983.86            | 6,028.60            | 5,990.19            | 18.89           | 14.45       | -149.10               | -458.33                           | -8.10      | 1,126.73             | 1,099.64              | 27.09                   | 41.588             |         |
| 6,200.00                | 6,083.86            | 6,131.94            | 6,093.53            | 19.04           | 14.64       | -149.15               | -458.77                           | -7.18      | 1,126.63             | 1,099.13              | 27.50                   | 40.975             |         |
| 6,213.87                | 6,097.73            | 6,145.15            | 6,106.74            | 19.07           | 14.66       | -149.15               | -458.78                           | -7.15      | 1,126.62             | 1,099.08              | 27.55                   | 40.896             |         |
| 6,300.00                | 6,183.86            | 6,233.76            | 6,195.34            | 19.20           | 14.81       | -149.14               | -458.63                           | -7.41      | 1,126.63             | 1,098.74              | 27.89                   | 40.400             |         |
| 6,400.00                | 6,283.86            | 6,338.64            | 6,300.22            | 19.35           | 14.99       | -149.09               | -457.72                           | -7.95      | 1,126.15             | 1,097.86              | 28.28                   | 39.816             |         |
| 6,500.00                | 6,383.86            | 6,439.77            | 6,401.34            | 19.50           | 15.16       | -149.06               | -456.80                           | -8.05      | 1,125.42             | 1,096.74              | 28.68                   | 39.241             |         |
| 6,600.00                | 6,483.86            | 6,532.85            | 6,494.42            | 19.66           | 15.33       | -149.06               | -456.39                           | -7.79      | 1,124.90             | 1,095.84              | 29.06                   | 38.707             |         |
| 6,617.38                | 6,501.24            | 6,548.67            | 6,510.24            | 19.69           | 15.35       | -149.06               | -456.37                           | -7.79      | 1,124.89             | 1,095.76              | 29.13                   | 38.619             |         |
| 6,700.00                | 6,583.86            | 6,627.09            | 6,588.66            | 19.82           | 15.50       | -149.06               | -456.52                           | -7.85      | 1,125.05             | 1,095.60              | 29.45                   | 38.205             |         |
| 6,800.00                | 6,683.86            | 6,725.86            | 6,687.43            | 19.97           | 15.68       | -149.09               | -457.22                           | -7.59      | 1,125.52             | 1,095.67              | 29.85                   | 37.706             |         |
| 6,900.00                | 6,783.86            | 6,825.53            | 6,787.10            | 20.13           | 15.86       | -149.09               | -457.66                           | -7.81      | 1,126.01             | 1,095.76              | 30.25                   | 37.225             |         |
| 7,000.00                | 6,883.86            | 6,925.75            | 6,887.30            | 20.29           | 16.04       | -149.01               | -457.26                           | -9.47      | 1,126.52             | 1,095.88              | 30.64                   | 36.765             |         |
| 7,100.00                | 6,983.86            | 7,026.50            | 6,988.04            | 20.46           | 16.23       | -148.96               | -457.18                           | -10.49     | 1,126.98             | 1,095.94              | 31.04                   | 36.304             |         |
| 7,200.00                | 7,083.86            | 7,118.98            | 7,080.51            | 20.62           | 16.40       | -148.92               | -457.29                           | -11.66     | 1,127.73             | 1,096.30              | 31.43                   | 35.885             |         |
| 7,300.00                | 7,183.86            | 7,239.54            | 7,201.07            | 20.78           | 16.62       | -148.86               | -456.95                           | -12.65     | 1,127.91             | 1,096.05              | 31.86                   | 35.397             |         |
| 7,400.00                | 7,283.86            | 7,345.03            | 7,306.55            | 20.95           | 16.80       | -148.84               | -455.63                           | -12.53     | 1,126.77             | 1,094.49              | 32.28                   | 34.909             |         |
| 7,500.00                | 7,383.86            | 7,439.88            | 7,401.40            | 21.12           | 16.97       | -148.85               | -454.97                           | -11.90     | 1,125.83             | 1,093.16              | 32.67                   | 34.457             |         |
| 7,600.00                | 7,483.86            | 7,540.91            | 7,502.42            | 21.28           | 17.16       | -148.88               | -454.68                           | -10.96     | 1,125.11             | 1,092.02              | 33.09                   | 34.006             |         |
| 7,700.00                | 7,583.86            | 7,644.97            | 7,606.47            | 21.45           | 17.35       | -148.94               | -454.32                           | -9.36      | 1,124.01             | 1,090.51              | 33.51                   | 33.544             |         |
| 7,800.00                | 7,683.86            | 7,741.31            | 7,702.80            | 21.62           | 17.53       | -149.00               | -453.99                           | -7.75      | 1,122.87             | 1,088.95              | 33.92                   | 33.108             |         |
| 7,900.00                | 7,783.86            | 7,835.16            | 7,796.64            | 21.79           | 17.70       | -149.04               | -453.90                           | -6.87      | 1,122.30             | 1,087.99              | 34.31                   | 32.707             |         |
| 7,970.17                | 7,854.03            | 7,901.55            | 7,863.03            | 21.91           | 17.83       | -149.07               | -454.16                           | -6.18      | 1,122.16             | 1,087.57              | 34.60                   | 32.437             |         |
| 8,000.00                | 7,883.86            | 7,928.61            | 7,890.08            | 21.96           | 17.88       | -149.09               | -454.38                           | -5.88      | 1,122.20             | 1,087.48              | 34.71                   | 32.327             |         |
| 8,100.00                | 7,983.86            | 8,024.88            | 7,986.34            | 22.14           | 18.07       | -149.18               | -455.68                           | -4.77      | 1,122.76             | 1,087.63              | 35.13                   | 31.963             |         |
| 8,200.00                | 8,083.86            | 8,128.06            | 8,089.49            | 22.31           | 18.28       | -149.28               | -457.13                           | -3.18      | 1,123.18             | 1,087.62              | 35.55                   | 31.590             |         |
| 8,300.00                | 8,183.86            | 8,233.15            | 8,194.58            | 22.48           | 18.48       | -149.36               | -458.00                           | -1.96      | 1,123.30             | 1,087.32              | 35.98                   | 31.218             |         |
| 8,400.00                | 8,283.86            | 8,338.94            | 8,300.35            | 22.66           | 18.69       | -149.45               | -458.51                           | -0.23      | 1,122.88             | 1,086.47              | 36.41                   | 30.838             |         |
| 8,426.03                | 8,309.89            | 8,359.00            | 8,320.41            | 22.71           | 18.72       | -149.46               | -458.52                           | 0.08       | 1,122.71             | 1,086.20              | 36.51                   | 30.752             |         |
| 8,486.14                | 8,370.00            | 8,359.00            | 8,320.41            | 22.81           | 18.72       | -149.46               | -458.52                           | 0.08       | 1,124.24             | 1,087.60              | 36.63                   | 30.688             |         |



# Weatherford International Ltd.

## Anticollision Report



|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-51CS                |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5311.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | Bonanza 1023-51              | <b>MD Reference:</b>                | WELL @ 5311.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | BONANZA 1023-51CS            | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | BONANZA 1023-51CS            | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 4-28-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design                  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|--------------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 100-NS-GYRO-MS |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.00 ft |
| Reference                      |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         |                    | Warning |
| Measured Depth (ft)            | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  |         |
| 0.00                           | 0.00                | 0.00                | 0.00                | 0.00            | 0.00        | 146.25                | -13.84                            | 9.25       | 21.75                |                       |                         |                    |         |
| 100.00                         | 100.00              | 86.06               | 86.06               | 0.10            | 0.11        | 146.34                | -13.72                            | 9.14       | 16.49                | 16.27                 | 0.22                    | 76.135             |         |
| 200.00                         | 200.00              | 186.07              | 186.07              | 0.33            | 0.36        | 146.30                | -13.37                            | 8.92       | 16.07                | 15.39                 | 0.68                    | 23.548             |         |
| 291.53                         | 291.53              | 277.54              | 277.53              | 0.53            | 0.54        | 145.50                | -13.06                            | 8.98       | 15.85                | 14.78                 | 1.07                    | 14.801 CC          |         |
| 300.00                         | 300.00              | 285.99              | 285.99              | 0.55            | 0.55        | 145.39                | -13.05                            | 9.01       | 15.85                | 14.75                 | 1.11                    | 14.333             |         |
| 400.00                         | 399.95              | 386.01              | 386.01              | 0.78            | 0.76        | 105.13                | -12.80                            | 9.23       | 16.26                | 14.72                 | 1.54                    | 10.582 ES          |         |
| 500.00                         | 499.63              | 485.72              | 485.72              | 1.02            | 1.02        | 127.66                | -12.38                            | 9.13       | 19.38                | 17.36                 | 2.02                    | 9.574 SF           |         |
| 600.00                         | 598.77              | 584.79              | 584.78              | 1.28            | 1.28        | 148.39                | -12.11                            | 9.07       | 29.02                | 26.49                 | 2.53                    | 11.491             |         |
| 700.00                         | 697.08              | 683.22              | 683.22              | 1.62            | 1.50        | 160.19                | -12.04                            | 9.21       | 45.46                | 42.48                 | 2.98                    | 15.243             |         |
| 800.00                         | 794.31              | 780.58              | 780.58              | 2.04            | 1.70        | 166.55                | -11.85                            | 9.58       | 67.54                | 64.13                 | 3.41                    | 19.788             |         |
| 900.00                         | 890.18              | 876.28              | 876.27              | 2.55            | 1.93        | 170.31                | -11.69                            | 9.82       | 95.15                | 91.28                 | 3.87                    | 24.607             |         |
| 966.55                         | 953.10              | 939.30              | 939.30              | 2.94            | 2.08        | 172.01                | -11.66                            | 9.85       | 116.54               | 112.36                | 4.18                    | 27.895             |         |
| 1,000.00                       | 984.53              | 970.93              | 970.93              | 3.15            | 2.17        | 172.72                | -11.59                            | 9.90       | 127.81               | 123.46                | 4.35                    | 29.386             |         |
| 1,100.00                       | 1,078.51            | 1,065.42            | 1,065.42            | 3.79            | 2.38        | 174.23                | -11.34                            | 10.26      | 161.38               | 156.54                | 4.84                    | 33.315             |         |
| 1,200.00                       | 1,172.48            | 1,159.70            | 1,159.69            | 4.45            | 2.56        | 175.07                | -11.28                            | 11.05      | 194.87               | 189.55                | 5.32                    | 36.635             |         |
| 1,300.00                       | 1,266.45            | 1,253.89            | 1,253.88            | 5.11            | 2.74        | 175.65                | -11.26                            | 11.87      | 228.38               | 222.59                | 5.80                    | 39.404             |         |
| 1,400.00                       | 1,360.42            | 1,348.37            | 1,348.35            | 5.78            | 2.94        | 176.11                | -11.15                            | 12.64      | 261.88               | 255.58                | 6.30                    | 41.574             |         |
| 1,500.00                       | 1,454.39            | 1,442.33            | 1,442.31            | 6.46            | 3.17        | 176.58                | -10.56                            | 13.08      | 295.29               | 288.46                | 6.83                    | 43.232             |         |
| 1,600.00                       | 1,548.36            | 1,535.69            | 1,535.67            | 7.14            | 3.42        | 176.97                | -10.12                            | 13.26      | 329.00               | 321.62                | 7.38                    | 44.602             |         |
| 1,700.00                       | 1,642.33            | 1,630.83            | 1,630.80            | 7.81            | 3.67        | 177.28                | -9.71                             | 13.46      | 362.73               | 354.80                | 7.93                    | 45.746             |         |
| 1,800.00                       | 1,736.31            | 1,726.47            | 1,726.44            | 8.50            | 3.91        | 177.55                | -8.86                             | 14.01      | 395.93               | 387.44                | 8.48                    | 46.675             |         |
| 1,900.00                       | 1,830.28            | 1,818.07            | 1,818.04            | 9.18            | 4.14        | 177.74                | -8.46                             | 14.47      | 429.47               | 420.45                | 9.02                    | 47.612             |         |
| 2,000.00                       | 1,924.25            | 1,912.28            | 1,912.25            | 9.86            | 4.38        | 177.90                | -8.24                             | 14.81      | 463.25               | 453.68                | 9.56                    | 48.432             |         |
| 2,100.00                       | 2,018.22            | 2,006.37            | 2,006.33            | 10.55           | 4.62        | 178.05                | -7.94                             | 15.08      | 497.02               | 486.90                | 10.12                   | 49.115             |         |
| 2,200.00                       | 2,112.19            | 2,100.00            | 2,099.97            | 11.23           | 4.87        | 178.18                | -7.62                             | 15.33      | 530.80               | 520.12                | 10.68                   | 49.719             |         |
| 2,287.49                       | 2,194.40            | 2,180.90            | 2,180.87            | 11.83           | 5.07        | 178.27                | -7.46                             | 15.47      | 560.49               | 549.34                | 11.15                   | 50.258             |         |
| 2,300.00                       | 2,206.17            | 2,192.39            | 2,192.36            | 11.91           | 5.10        | 178.29                | -7.46                             | 15.47      | 564.74               | 553.51                | 11.22                   | 50.311             |         |
| 2,400.00                       | 2,300.77            | 2,286.12            | 2,286.09            | 12.43           | 5.25        | 178.38                | -7.60                             | 15.54      | 597.17               | 585.47                | 11.70                   | 51.041             |         |
| 2,500.00                       | 2,396.32            | 2,381.56            | 2,381.52            | 12.92           | 5.33        | 178.44                | -7.97                             | 15.72      | 626.77               | 614.68                | 12.09                   | 51.843             |         |
| 2,600.00                       | 2,492.73            | 2,477.63            | 2,477.59            | 13.38           | 5.40        | 178.48                | -8.36                             | 15.89      | 653.46               | 641.01                | 12.45                   | 52.474             |         |
| 2,700.00                       | 2,589.90            | 2,575.59            | 2,575.55            | 13.79           | 5.49        | 178.50                | -8.83                             | 16.15      | 677.19               | 664.37                | 12.82                   | 52.830             |         |
| 2,800.00                       | 2,687.74            | 2,673.57            | 2,673.53            | 14.17           | 5.62        | 178.48                | -9.45                             | 16.71      | 697.82               | 684.63                | 13.19                   | 52.901             |         |
| 2,900.00                       | 2,786.17            | 2,767.38            | 2,767.34            | 14.50           | 5.72        | 178.46                | -10.22                            | 17.09      | 715.71               | 702.19                | 13.52                   | 52.929             |         |
| 3,000.00                       | 2,885.10            | 2,866.57            | 2,866.51            | 14.80           | 5.82        | 178.41                | -11.53                            | 17.21      | 731.12               | 717.30                | 13.83                   | 52.883             |         |
| 3,100.00                       | 2,984.42            | 2,964.23            | 2,964.16            | 15.05           | 5.94        | 178.32                | -13.14                            | 17.91      | 743.31               | 729.19                | 14.12                   | 52.645             |         |
| 3,200.00                       | 3,084.05            | 3,063.00            | 3,062.91            | 15.25           | 6.06        | 178.20                | -15.10                            | 18.44      | 752.83               | 738.43                | 14.40                   | 52.286             |         |
| 3,300.00                       | 3,183.90            | 3,164.17            | 3,164.07            | 15.42           | 6.18        | 178.11                | -16.77                            | 18.82      | 759.18               | 744.53                | 14.66                   | 51.800             |         |
| 3,400.00                       | 3,283.86            | 3,264.69            | 3,264.57            | 15.54           | 6.32        | 178.03                | -18.12                            | 19.12      | 762.34               | 747.44                | 14.90                   | 51.154             |         |
| 3,430.14                       | 3,314.00            | 3,294.86            | 3,294.74            | 15.57           | 6.37        | -133.71               | -18.55                            | 19.24      | 762.69               | 747.71                | 14.98                   | 50.930             |         |
| 3,500.00                       | 3,383.86            | 3,364.80            | 3,364.67            | 15.64           | 6.47        | -133.79               | -19.60                            | 19.59      | 763.17               | 747.97                | 15.19                   | 50.239             |         |
| 3,600.00                       | 3,483.86            | 3,465.39            | 3,465.25            | 15.73           | 6.63        | -133.91               | -21.22                            | 20.23      | 763.82               | 748.29                | 15.53                   | 49.195             |         |
| 3,700.00                       | 3,583.86            | 3,566.25            | 3,566.10            | 15.83           | 6.81        | -134.03               | -22.80                            | 20.99      | 764.37               | 748.49                | 15.87                   | 48.151             |         |
| 3,800.00                       | 3,683.86            | 3,666.47            | 3,666.30            | 15.94           | 6.99        | -134.15               | -24.30                            | 21.79      | 764.83               | 748.60                | 16.23                   | 47.120             |         |
| 3,900.00                       | 3,783.86            | 3,766.37            | 3,766.19            | 16.04           | 7.17        | -134.26               | -25.64                            | 22.44      | 765.30               | 748.71                | 16.59                   | 46.118             |         |
| 4,000.00                       | 3,883.86            | 3,865.40            | 3,865.21            | 16.15           | 7.35        | -134.35               | -26.86                            | 22.90      | 765.83               | 748.88                | 16.95                   | 45.176             |         |
| 4,100.00                       | 3,983.86            | 3,963.98            | 3,963.79            | 16.26           | 7.53        | -134.43               | -28.10                            | 23.15      | 766.53               | 749.22                | 17.31                   | 44.287             |         |
| 4,200.00                       | 4,083.86            | 4,064.56            | 4,064.35            | 16.37           | 7.69        | -134.50               | -29.32                            | 23.22      | 767.33               | 749.68                | 17.65                   | 43.469             |         |
| 4,300.00                       | 4,183.86            | 4,166.29            | 4,166.08            | 16.49           | 7.84        | -134.53               | -30.11                            | 23.13      | 767.94               | 749.95                | 17.99                   | 42.685             |         |
| 4,400.00                       | 4,283.86            | 4,267.09            | 4,266.88            | 16.60           | 8.00        | -134.55               | -30.52                            | 22.94      | 768.36               | 750.02                | 18.33                   | 41.911             |         |
| 4,500.00                       | 4,383.86            | 4,367.44            | 4,367.23            | 16.72           | 8.16        | -134.56               | -30.94                            | 22.84      | 768.72               | 750.04                | 18.68                   | 41.156             |         |
| 4,600.00                       | 4,483.86            | 4,467.28            | 4,467.06            | 16.84           | 8.32        | -134.58               | -31.36                            | 22.77      | 769.06               | 750.04                | 19.02                   | 40.428             |         |
| 4,700.00                       | 4,583.86            | 4,566.86            | 4,566.64            | 16.97           | 8.47        | -134.59               | -31.71                            | 22.57      | 769.45               | 750.09                | 19.37                   | 39.727             |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Weatherford International Ltd.

## Anticollision Report



|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-511CS               |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5311.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | Bonanza 1023-51              | <b>MD Reference:</b>                | WELL @ 5311.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | BONANZA 1023-511CS           | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | BONANZA 1023-511CS           | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 4-28-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design                  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|--------------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 100-NS-GYRO-MS |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.00 ft |
| Reference                      |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         |                    |         |
| Measured Depth (ft)            | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 4,800.00                       | 4,683.86            | 4,667.74            | 4,667.52            | 17.09           | 8.60        | -134.59               | -31.95                            | 22.25      | 769.84               | 750.15                | 19.69                   | 39.096             |         |
| 4,900.00                       | 4,783.86            | 4,769.26            | 4,769.05            | 17.22           | 8.72        | -134.57               | -31.90                            | 21.92      | 770.05               | 750.05                | 20.00                   | 38.497             |         |
| 5,000.00                       | 4,883.86            | 4,869.39            | 4,869.17            | 17.35           | 8.87        | -134.54               | -31.72                            | 21.64      | 770.12               | 749.78                | 20.34                   | 37.859             |         |
| 5,100.00                       | 4,983.86            | 4,968.91            | 4,968.69            | 17.48           | 9.03        | -134.55               | -31.85                            | 21.60      | 770.24               | 749.55                | 20.69                   | 37.220             |         |
| 5,200.00                       | 5,083.86            | 5,068.59            | 5,068.38            | 17.62           | 9.22        | -134.57               | -32.24                            | 21.74      | 770.42               | 749.33                | 21.09                   | 36.538             |         |
| 5,300.00                       | 5,183.86            | 5,168.35            | 5,168.14            | 17.75           | 9.44        | -134.60               | -32.66                            | 21.86      | 770.62               | 749.13                | 21.49                   | 35.852             |         |
| 5,400.00                       | 5,283.86            | 5,268.84            | 5,268.63            | 17.89           | 9.66        | -134.63               | -33.07                            | 21.98      | 770.83               | 748.92                | 21.91                   | 35.178             |         |
| 5,500.00                       | 5,383.86            | 5,369.68            | 5,369.46            | 18.03           | 9.88        | -134.66               | -33.44                            | 22.19      | 770.94               | 748.60                | 22.34                   | 34.517             |         |
| 5,600.00                       | 5,483.86            | 5,469.51            | 5,469.29            | 18.17           | 10.11       | -134.69               | -33.78                            | 22.46      | 770.98               | 748.22                | 22.76                   | 33.873             |         |
| 5,700.00                       | 5,583.86            | 5,568.91            | 5,568.69            | 18.31           | 10.34       | -134.72               | -34.15                            | 22.67      | 771.09               | 747.91                | 23.19                   | 33.253             |         |
| 5,800.00                       | 5,683.86            | 5,668.58            | 5,668.35            | 18.45           | 10.56       | -134.75               | -34.56                            | 22.82      | 771.27               | 747.66                | 23.62                   | 32.660             |         |
| 5,900.00                       | 5,783.86            | 5,768.36            | 5,768.14            | 18.60           | 10.79       | -134.78               | -34.97                            | 22.94      | 771.48               | 747.44                | 24.04                   | 32.089             |         |
| 6,000.00                       | 5,883.86            | 5,867.82            | 5,867.60            | 18.75           | 11.01       | -134.82               | -35.48                            | 23.09      | 771.73               | 747.26                | 24.47                   | 31.536             |         |
| 6,100.00                       | 5,983.86            | 5,967.13            | 5,966.90            | 18.89           | 11.24       | -134.88               | -36.34                            | 23.47      | 772.07               | 747.17                | 24.90                   | 31.002             |         |
| 6,200.00                       | 6,083.86            | 6,064.51            | 6,064.28            | 19.04           | 11.46       | -134.97               | -37.52                            | 23.95      | 772.58               | 747.25                | 25.33                   | 30.502             |         |
| 6,300.00                       | 6,183.86            | 6,160.95            | 6,160.70            | 19.20           | 11.68       | -135.05               | -38.95                            | 24.08      | 773.54               | 747.79                | 25.75                   | 30.040             |         |
| 6,400.00                       | 6,283.86            | 6,259.81            | 6,259.55            | 19.35           | 11.90       | -135.13               | -40.65                            | 23.93      | 774.86               | 748.68                | 26.17                   | 29.603             |         |
| 6,500.00                       | 6,383.86            | 6,360.33            | 6,360.05            | 19.50           | 12.11       | -135.22               | -42.40                            | 23.84      | 776.16               | 749.55                | 26.60                   | 29.178             |         |
| 6,600.00                       | 6,483.86            | 6,459.67            | 6,459.38            | 19.66           | 12.34       | -135.31               | -44.17                            | 23.83      | 777.43               | 750.40                | 27.03                   | 28.763             |         |
| 6,700.00                       | 6,583.86            | 6,558.24            | 6,557.93            | 19.82           | 12.56       | -135.41               | -46.12                            | 23.78      | 778.87               | 751.41                | 27.46                   | 28.366             |         |
| 6,800.00                       | 6,683.86            | 6,658.39            | 6,658.06            | 19.97           | 12.78       | -135.51               | -48.25                            | 23.71      | 780.44               | 752.54                | 27.89                   | 27.980             |         |
| 6,900.00                       | 6,783.86            | 6,759.72            | 6,759.36            | 20.13           | 13.01       | -135.61               | -50.22                            | 23.65      | 781.86               | 753.53                | 28.33                   | 27.597             |         |
| 7,000.00                       | 6,883.86            | 6,860.51            | 6,860.14            | 20.29           | 13.25       | -135.70               | -52.03                            | 23.66      | 783.14               | 754.37                | 28.77                   | 27.216             |         |
| 7,100.00                       | 6,983.86            | 6,960.93            | 6,960.54            | 20.46           | 13.48       | -135.82               | -53.99                            | 23.93      | 784.36               | 755.14                | 29.22                   | 26.842             |         |
| 7,200.00                       | 7,083.86            | 7,060.84            | 7,060.43            | 20.62           | 13.72       | -135.95               | -56.10                            | 24.41      | 785.54               | 755.87                | 29.67                   | 26.475             |         |
| 7,300.00                       | 7,183.86            | 7,160.43            | 7,159.99            | 20.78           | 13.96       | -136.08               | -58.22                            | 24.85      | 786.77               | 756.64                | 30.12                   | 26.119             |         |
| 7,400.00                       | 7,283.86            | 7,262.43            | 7,261.97            | 20.95           | 14.21       | -136.22               | -60.37                            | 25.34      | 787.96               | 757.37                | 30.58                   | 25.765             |         |
| 7,500.00                       | 7,383.86            | 7,366.04            | 7,365.56            | 21.12           | 14.46       | -136.36               | -62.37                            | 26.27      | 788.73               | 757.68                | 31.05                   | 25.403             |         |
| 7,600.00                       | 7,483.86            | 7,400.00            | 7,399.51            | 21.28           | 14.55       | -136.42               | -62.98                            | 26.68      | 792.01               | 760.67                | 31.34                   | 25.269             |         |
| 7,700.00                       | 7,583.86            | 7,400.00            | 7,399.51            | 21.45           | 14.55       | -136.42               | -62.98                            | 26.68      | 807.06               | 775.51                | 31.55                   | 25.577             |         |
| 7,800.00                       | 7,683.86            | 7,400.00            | 7,399.51            | 21.62           | 14.55       | -136.42               | -62.98                            | 26.68      | 833.92               | 802.15                | 31.76                   | 26.253             |         |
| 7,900.00                       | 7,783.86            | 7,400.00            | 7,399.51            | 21.79           | 14.55       | -136.42               | -62.98                            | 26.68      | 871.49               | 839.51                | 31.98                   | 27.254             |         |
| 8,000.00                       | 7,883.86            | 7,400.00            | 7,399.51            | 21.96           | 14.55       | -136.42               | -62.98                            | 26.68      | 918.46               | 886.27                | 32.19                   | 28.534             |         |
| 8,100.00                       | 7,983.86            | 7,400.00            | 7,399.51            | 22.14           | 14.55       | -136.42               | -62.98                            | 26.68      | 973.46               | 941.06                | 32.40                   | 30.045             |         |
| 8,200.00                       | 8,083.86            | 7,400.00            | 7,399.51            | 22.31           | 14.55       | -136.42               | -62.98                            | 26.68      | 1,035.23             | 1,002.62              | 32.61                   | 31.743             |         |
| 8,300.00                       | 8,183.86            | 7,400.00            | 7,399.51            | 22.48           | 14.55       | -136.42               | -62.98                            | 26.68      | 1,102.62             | 1,069.80              | 32.83                   | 33.591             |         |
| 8,400.00                       | 8,283.86            | 7,400.00            | 7,399.51            | 22.66           | 14.55       | -136.42               | -62.98                            | 26.68      | 1,174.67             | 1,141.63              | 33.04                   | 35.555             |         |
| 8,486.14                       | 8,370.00            | 7,400.00            | 7,399.51            | 22.81           | 14.55       | -136.42               | -62.98                            | 26.68      | 1,239.84             | 1,206.62              | 33.22                   | 37.320             |         |

|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-511CS               |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5311.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | Bonanza 1023-51              | <b>MD Reference:</b>                | WELL @ 5311.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | BONANZA 1023-511CS           | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | BONANZA 1023-511CS           | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 4-28-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

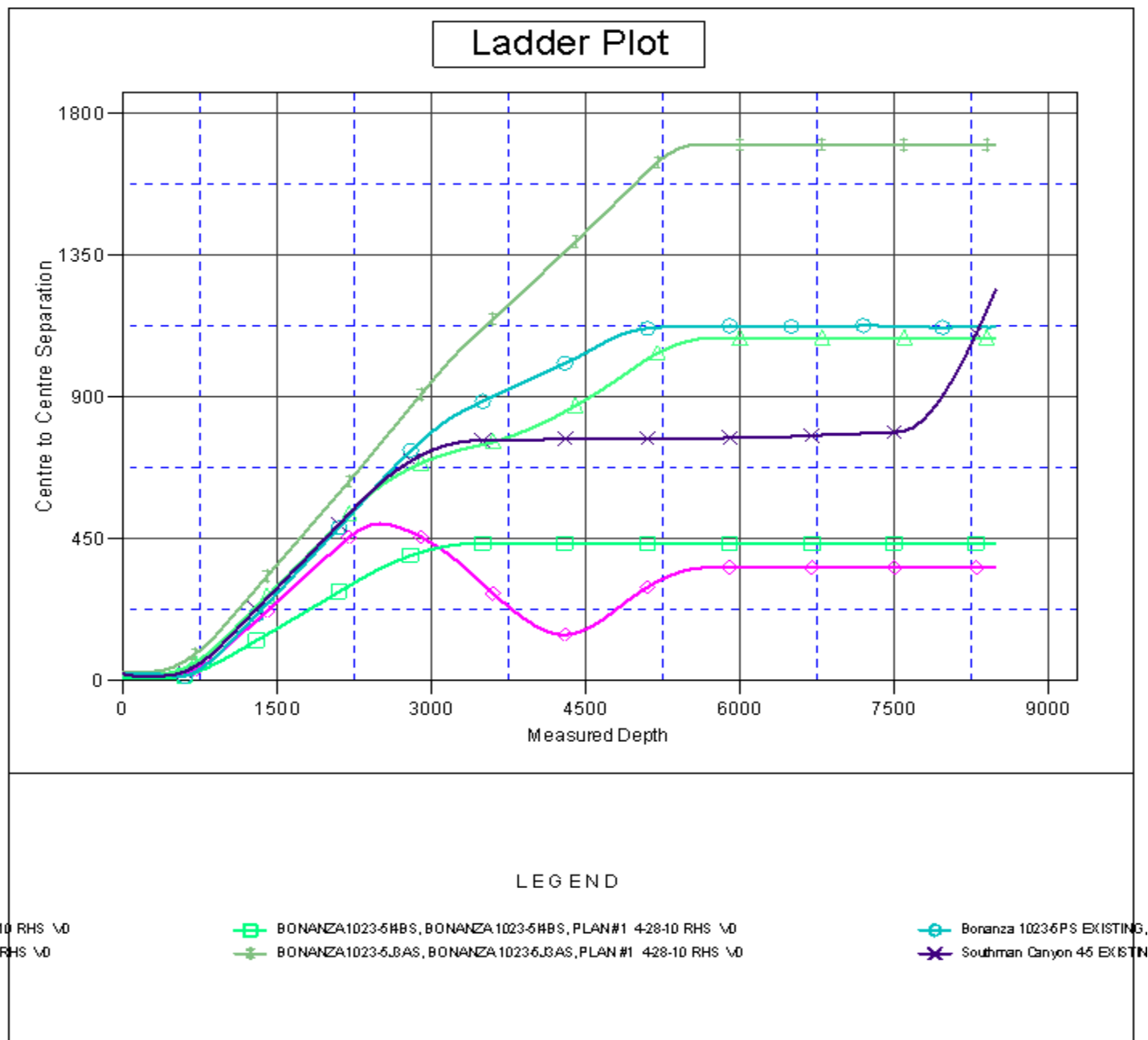
Reference Depths are relative to WELL @ 5311.00ft (Original Well Elev) Coordinates are relative to: BONANZA 1023-511CS

Offset Depths are relative to Offset Datum

Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N

Central Meridian is 111° 0' 0.000 W °

Grid Convergence at Surface is: 1.06°





|                           |                              |                                     |                                       |
|---------------------------|------------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | ANADARKO PETROLEUM CORP.     | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-511CS               |
| <b>Project:</b>           | UINTAH COUNTY, UTAH (nad 27) | <b>TVD Reference:</b>               | WELL @ 5311.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | Bonanza 1023-51              | <b>MD Reference:</b>                | WELL @ 5311.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                       | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | BONANZA 1023-511CS           | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                       | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | BONANZA 1023-511CS           | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 4-28-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

Reference Depths are relative to WELL @ 5311.00ft (Original Well Elev) Coordinates are relative to: BONANZA 1023-511CS

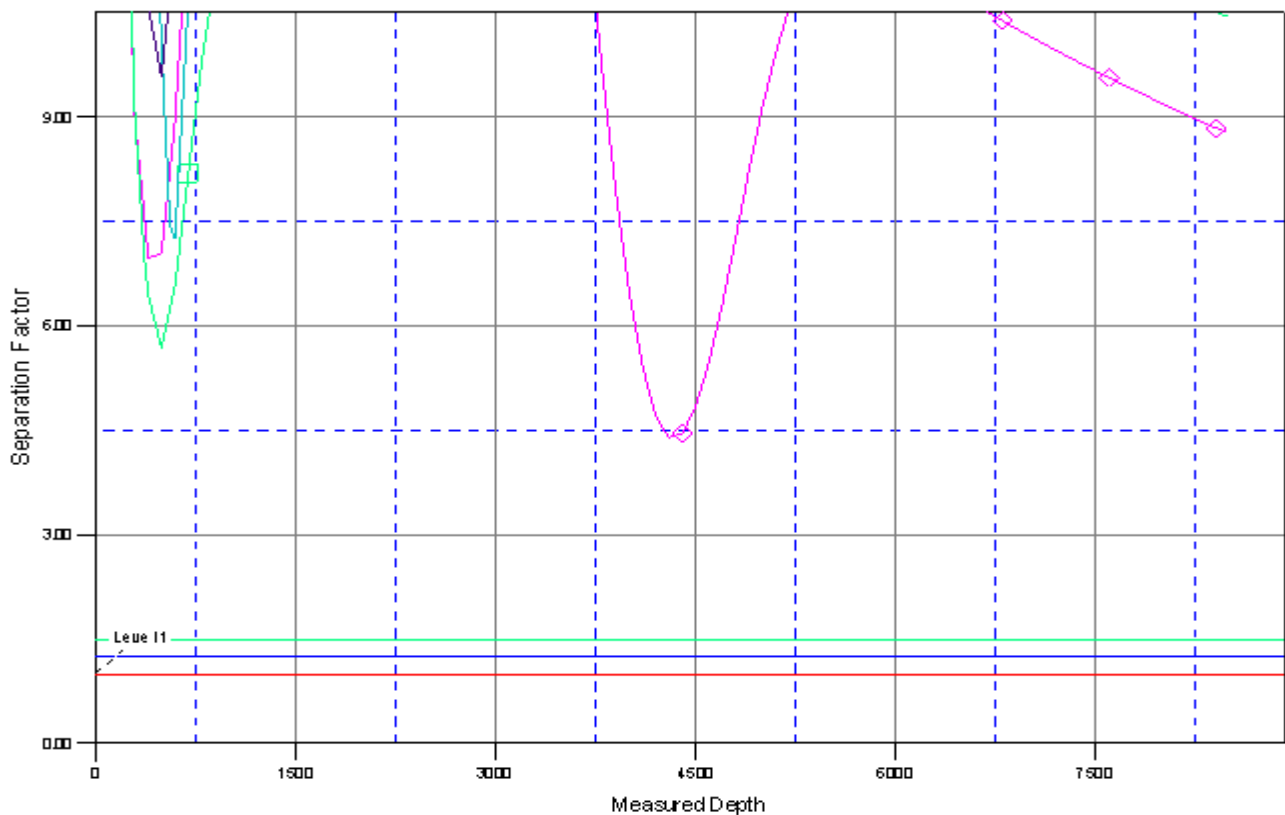
Offset Depths are relative to Offset Datum

Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N

Central Meridian is 111° 0' 0.000 W °

Grid Convergence at Surface is: 1.06°

## Separation Factor Plot



### LEGEND

 3-10 RHS \0  
 1 RHS \0

 BONANZA1023-5HBS, BONANZA1023-5HBS, PLAN#1 4-28-10 RHS \0  
 BONANZA1023-5BAS, BONANZA1023-5BAS, PLAN#1 4-28-10 RHS \0

 Bonanza 1023-6PS EXISTING,  
 Southman Canyon 45 EXISTING



Bonanza 1023-5G4DS/ 1023-5I1BS/ 1023-5I1CS  
 Bonanza 1023-5I4BS/ 1023-5J3AS  
 Kerr-McGee Oil Gas Onshore, L.P.

Bonanza 1023-5I Pad  
 Surface Use Plan of Operations  
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## Kerr-McGee Oil & Gas Onshore. L.P.

### Bonanza 1023-5I Pad

|              |                              |      |     |
|--------------|------------------------------|------|-----|
| <u>API #</u> | <u>BONANZA 1023-5G4DS</u>    |      |     |
|              | Surface: 1625 FSL / 1048 FEL | NESE | Lot |
|              | BHL: 2643 FNL / 1424 FEL     | SWNE | Lot |
| <u>API #</u> | <u>BONANZA 1023-5I1BS</u>    |      |     |
|              | Surface: 1629 FSL / 1039 FEL | NESE | Lot |
|              | BHL: 2491 FSL / 376 FEL      | NESE | Lot |
| <u>API #</u> | <u>BONANZA 1023-5I1CS</u>    |      |     |
|              | Surface: 1634 FSL / 1030 FEL | NESE | Lot |
|              | BHL: 2141 FSL / 460 FEL      | NESE | Lot |
| <u>API #</u> | <u>BONANZA 1023-5I4BS</u>    |      |     |
|              | Surface: 1639 FSL / 1021 FEL | NESE | Lot |
|              | BHL: 1705 FSL / 475 FEL      | NESE | Lot |
| <u>API #</u> | <u>BONANZA 1023-5J3AS</u>    |      |     |
|              | Surface: 1620 FSL / 1056 FEL | NESE | Lot |
|              | BHL: 1690 FSL / 2100 FEL     | NWSE | Lot |

This Surface Use Plan of Operations (SUPO) or 13-point plan provides site-specific information for the above-referenced wells.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

An on-site meeting was held on May 18, 2010. Present were:

- David Gordon, NRS; Kevin Sadiler, NRS; Ryan Angus, PET Engineer; Steve Strong, Reclamation; Dan Emmett, Wildlife Biologist - BLM;
- John Slaugh, Mitch Batty, Brian Venn, Jacob Dunham, Jake Edmunds, B.J. Reenders - 609 & Timberline Engineering & Land Surveying, Inc.
- Danielle Piernot and Kathy Schneebeck Dulnoan, Regulatory; Brad Burman, Completions; Clay Einerson, Construction; Grizz Oleen, Environmental; Charles Chase, Reclamation; Lovell Young, Drilling, Roger Parry and Ramey Hoopes, Construction

#### A. Existing Roads:

Existing roads consist of county and improved/unimproved access roads (two-tracks). In accordance with Onshore Order #1, Kerr-McGee will, in accordance with BMPs, improve or maintain existing roads in a condition that is the same as or better than before operations began. New or reconstructed proposed access roads are discussed in Section B.

The existing roads will be maintained in a safe and usable condition. Maintenance for existing roads will continue until final abandonment and reclamation of well pads and/or other facilities, as applicable. Road maintenance will include, but is not limited to, blading, ditching, and/or culvert installation and cleanout. To ensure safe operating conditions, gravel surfacing will be performed where excessive rutting or erosion may occur. Dust control will be performed as necessary to ensure safe operating conditions.

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Roads, gathering lines and electrical distribution lines will occupy common disturbance corridors where possible. Where available, roadways will be used as the staging area and working space for installation of gathering lines. All disturbances located in the same corridor will overlap each other to the maximum extent possible, while maintaining safe and sound construction and installation practices. Unless otherwise approved or requested in site specific documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

**All access roads leading to the pad are existing and on lease; therefore do not require a ROW.**

\*\* Please refer to Topo B

±225' (0.1 miles) – Section 5 T10S R23E (NE/4 SE/4) – On-lease UTU33433, from the proposed road re-route at the 1023-5I intersection to tie-in to the the county road intersection.

#### **B. New or Reconstructed Access Roads:**

All new or reconstructed roads will be located, designed, and maintained to meet the standards of the BLM. BMPs. Described in the BLM's Surface Operating Standards for Oil and Gas Exploration and Development, 4th Edition (Gold Book) (USDI and USDA, 2007) and/or BLM Manual Section 9113 (1985) will be considered in consultation with the BLM in the design, construction, improvement and maintenance of all new or reconstructed roads. If a new road would cross a water of the United States, Kerr-McGee will adhere to the requirements of applicable Nationwide Permits of the Department of Army Corps of Engineers.

Each new well pad or pad expansion may require construction of a new access road and/or de-commissioning of an older road. Plans, routes, and distances for new roads and road improvements are provided in design packages, exhibits and maps for a project. Project-specific maps are submitted to depict the locations of existing, proposed, and/or decommissioned and include the locations for supporting structures, including, but not limited to, culverts, bridges, low water crossings, range infrastructure, and haul routes, as per OSO 1. Designs for cuts and fills, including spoils source and storage areas, are provided with the road designs, as necessary.

Where safety objectives can be met. As applicable, Kerr-McGee may use unimproved and/or two-track roads for lease operations, to lessen total disturbance.

Road designs will be based on the road safety requirements, traffic characteristics, environmental conditions, and the vehicles the road is intended to carry. Generally, newly constructed unpaved lease roads will be crowned and ditched with the running surfaces of the roads approximately 12-18 feet wide and a total road corridor width not to exceed 45 feet, except where noted in the road design for a specific project. Maximum grade will generally not exceed 8%. Borrow ditches will be back sloped 3:1 or less. Construction BMPs will be employed to control onsite and offsite erosion.

Where topography would direct storm water runoff to an access road or well pad, drainage ditches or other common drainage control facilities, such as V- or wing-ditches, will be constructed to divert surface water runoff. Drainage features, including culverts, will be constructed or installed prior to commencing other operations, including drilling or facilities placement. Riprap will be placed at the inlet and outlet at the culvert(s), as necessary.

Prior to construction, new access road(s) will be staked according to the requirements of OSO 1. Construction activity will not be conducted using frozen or saturated materials or during periods when significant watershed damage (e.g. rutting, extensive sheet soil erosion, formation of rills/gullies, etc.) is likely to occur. Vegetative debris will not be placed in or under fill embankments.

New road maintenance will include, but is not limited to, blading, ditching, culvert installation and cleanout, gravel surfacing where excessive rutting or erosion may occur and dust control, as necessary to ensure safe operating

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 Kerr-McGee Oil Gas Onshore, L.P.

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conditions. All vehicular traffic, personnel movement, construction/restoration operations will be confined to the approved area and to existing roadways and/or access routes.

Snow removal will be conducted on an as-needed basis to accommodate safe travel. Snow removal will occur as necessary throughout the year, as will necessary drainage ditch construction. Removed snow may be stored on permitted well pads to reduce hauling distances and/or at the aerial extent of approved disturbance boundaries to facilitate snow removal for the remainder of the season.

If a county road crossing or encroachment permit is needed, it will be obtained prior to construction.

±320' (0.06 miles) – Section 5 T10S R23E (SE/4 SE/4) – On-lease UTU33433, from existing road traveling Northwest to re-route around the Bonanza 1023-5I pad to tie-in to the existing county road intersection.

\*\* Please refer to Topo B

#### C. Location of Existing Wells:

A) Refer to Topo Map C.

#### D. Location of Existing and/or Proposed Facilities:

This pad will expand the existing pad for the Bonanza 1023-5PS, which is a producing gas well, and the Southman Canyon 4-5, which is a plugged and abandoned well according to the Utah Division of Oil, Gas and Mining (UDOGM) records on May 25, 2011. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad. A berm will be constructed completely around production components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will generally be constructed of compacted subsoil or corrugated metal, and will hold the capacity of the largest tank and have sufficient freeboard to accommodate a 25 year rainfall event. This includes pumping units. Aboveground structures constructed or installed onsite for 6 months or longer, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with the BLM (typically Shadow Gray). A production facility layout is provided as part of a project-specific APD, ROW or NOS submission.

#### GAS GATHERING

*Please refer to Exhibit B and Topo D- Pad and Pipeline Detail.*

The gas gathering pipeline material: Steel line pipe. Surface = Bare pipe. Buried = Coated with fusion bonded epoxy coating (or equivalent). The total gas gathering pipeline distance from the meter to the tie in point is ±820' and the individual segments are broken up as follows:

**The following segments are "onlease", no ROW needed.**

±680' (0.1 miles) – Section 5 T10S R23E (NE/4 SE/4) – On-lease UTU33433, BLM surface, New 6" buried gas gathering pipeline from the first meter house to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

±30' (0.01 miles) – Section 5 T10S R23E (NE/4 SE/4) – On-lease UTU33433, BLM surface, New 6" buried gas gathering pipeline from the edge of the pad to tie-in to the proposed 8" gas gathering pipeline at the 1023-5P intersection. Please refer to Topo D and Exhibit A, Line 10

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±110' (0.02 miles) – Section 5 T10S R23E (NE/4 SE/4) – On-lease UTU33433, BLM surface, New 8" buried gas gathering pipeline from the 1023-5P intersection to the existing 16" buried pipeline. Please refer to Exhibit A, Line 9. This pipeline will be used concurrently with the Bonanza 1023-5P Pad.

### **LIQUID GATHERING**

The total liquid gathering pipeline distance from the separator to the tie in point is ±1,710' and the individual segments are broken up as follows:

**The following segments are "onlease", no ROW needed.**

- ±680' (0.1 miles) – Section 5 T10S R23E (NE/4 SE/4) – On-lease UTU33433, BLM surface, New 6" buried liquid gathering pipeline from the first meter house to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- ±30' (0.01 miles) – Section 5 T10S R23E (NE/4 SE/4) – On-lease UTU33433, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad to tie-in to the proposed 6" liquid gathering pipeline at the 1023-5P intersection. Please refer to Topo D and Exhibit B, Line 11.
- ±1,000' (0.2 miles) – Section 5 T10S R23E (NE/4 SE/4) – Lease UTU33433, BLM surface, New 6" buried liquid gathering pipeline from the proposed 6" buried liquid at the 1023-5I intersection to the tie-in at the compressor station. Please refer to Exhibit B, Line 10. This pipeline will be used concurrently with the Bonanza 1023-5P Pad.

### **Pipeline Gathering Construction**

Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee. Gas gathering pipeline(s), gas lift, or liquids pipelines may be constructed to lie on the surface or be buried. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. The area of disturbance during construction from the edge of road or well pad will typically be 30' in width. Where pipelines run cross country, the width of disturbance will typically be 45 ft for buried lines and 30 ft for surface lines. In addition, Kerr-McGee requests for a permanent 30' disturbance width that will be maintained for the portion adjacent to the road. The need for the 30' permanent disturbance width is for maintenance and repairs. Cross country permanent disturbance width also are required to be 30ft.

Above-ground installation will generally not require clearing of vegetation or blading of the surface, except where safety considerations necessitate earthwork. In some surface pipeline installation instances pipe cannot be constructed where it will lay. In these cases where an above-ground pipeline is constructed parallel and adjacent to a road, it will be welded/fused on the road and then lifted from the road to the pipeline route. In other cases where a pipeline route is not parallel and adjacent to a road (cross-country between sites), it will be welded/fused in place at a well pad, access road, or designated work area and pulled between connection locations with a suitable piece of equipment.

Buried pipelines will generally be installed parallel and adjacent to existing and/or newly constructed roads and within the permitted disturbance corridor. Buried pipelines may vary from 2 inches (typically fuel gas lines) to 24 inches (typically transportation lines) in diameter, but 6 to 16 inches is typical for a buried gas line. The diameter of liquids pipelines may vary from 2 inches to 12 inches, but 6 inches is the typical diameter. Gas lift lines may vary from 2 to 12 inches in diameter, but 6-inch diameter pipes are generally used for gas lift. If two or more pipelines are present (gas gathering, gas lift, and fluids), they will share a common trench where possible.

Typically, to install a buried pipeline, topsoil will be removed, windrowed and placed on the non-working side of the route for later reclamation. Because working room is limited, the spoil may be spread out across the working side and construction will take place on the spoil. The working side of the corridor will be used for pipe stringing, bending, welding and equipment travel. Small areas on the working side displaying ruts or uneven ground will be groomed to facilitate the safe passage of equipment. After the pipelines are installed, spoil will be placed back into the trench, and the topsoil will be redistributed over the disturbed corridor prior to final reclamation. Typical depth of the trench will be 6 feet, but depths may vary

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according to site-specific conditions (presence of bedrock, etc.). The proposed trench width for the pipeline would range from 18-48 inches.

The pipeline will be welded along the proposed route and lowered into place. Trenching equipment will cut through the soil or into the bedrock and create good backfill, eliminating the need to remove large rocks. The proposed buried pipeline will be visually and radiographically inspected and the entire pipeline will be pneumatically or hydrostatically tested before being placed into service. Routine vehicle traffic will be prevented from using pipeline routes as travel ways by posting signs at the route's intersection with an access road.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

If pipelines or roads encounter a drainage that could be subject to flooding or surface water during extreme precipitation events, Kerr-McGee will apply all applicable Army Corps mandates as well as the BLM's Hydraulic Considerations for Pipeline Crossings of Stream Channels (BLM Technical Note 423, April 2007). In addition, all stream and drainage crossings will be evaluated to determine the need for stream alteration permits from the State of Utah Division of Water Rights and if necessary, required permits will be secured. Similarly, where a road or pipeline crossing exists the pipe will be butt welded and buried to a depth between 24 and 48 inches or more. Dirt roads will be cut and restored to a condition equivalent to the existing condition. All Uintah County road encroachment and crossing permits, where applicable, will be obtained prior to crossing construction. In no case will pressure testing of pipelines result in discharge of liquids to the surface.

Pipeline signs will be installed along the route to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves and lateral T's will be installed at various locations for production integrity and safety purposes.

Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to section J for more details regarding final reclamation.

When no longer deemed necessary by the operator, Kerr-McGee or its successor will consult with the BLM, Vernal Field Office before terminating of the use of the pipeline(s).

#### **The Anadarko Completions Transportation System (ACTS) information:**

Please refer to Exhibit C for ACTs Lines

Kerr-McGee will use either a closed loop drilling system that will require one pit and one storage area to be constructed on the drilling pad or a traditional drilling operation with one pit. The storage area will be used to contain only the de-watered drill cuttings and will be lined and reclaimed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit is lined and will be used for the wells drilled on the pad or used as part of our Anadarko Completions Transportation (ACTS) system which is discussed in more detail below. Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completion pit.

If Kerr-McGee does not use a closed loop system, it will construct a drilling reserve pit to contain drill cuttings and for use in completion operations. Depending on the location of the pit, its relation to future drilling locations, the reserve/completion pit will be utilized for the completion of the wells on that pad and/or be used as part of our ACTS system.

Kerr-McGee will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of frac fluids by utilizing existing reserve pits and temporary, surface-laid aluminum liquids transfer lines between frac locations. The pit will be refurbished as follows

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when a traditional drill pit is used: mix and pile up drill cuttings with dry dirt, bury the original liner in the pit, walk bottom of pit with cat. Kerr-McGee will reline the pit with a 30 mil liner and double felt padding. The refurbished pit will be the same size or smaller as specified in the originally approved ROW/APD. The pit refurb will be done in a normal procedure and there will be no modification to the pit.

All four sides of the completions pit will be fenced in according to standard pit fencing procedures. Netting will be installed over all pits.

The collected hydrocarbons will be treated and sold at approved sales facilities. A loading rack with drip containment will also be installed where water trucks would unload and load to prevent damage caused from pulling hoses in and out of the pit .

ACTS will require temporarily laying multiple 6" aluminum water transfer lines on the surface between either existing or refurbished reserve pits. Please see the attached ACTS exhibit C for placement of the proposed temporary lines. The temporary aluminum transfer lines will be utilized to transport frac fluid being injected and/or recovered during the completion process and will be laid adjacent to existing access roads or pipeline corridors. Upon completion of the frac operation, the liquids transfer lines will be flushed with fresh water and purged with compressed air. The contents of the transfer lines will be flushed into a water truck for delivery to another ACTS location or a reserve pit.

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig. Kerr-McGee requests to keep the netted pit open for one year from first production of the first produced well on the pad. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other frac jobs in the area. After one year Kerr-McGee will backfill the pit and reclaim. If the pit is not needed for an entire year it will be backfilled and reclaimed earlier. Kerr-McGee understands that due to the temporary nature of this system, BLM considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BLM.

#### **E. Location and Types of Water Supply:**

Water for drilling and completion operations will be obtained from the following sources:

|                  |                   |                                    |
|------------------|-------------------|------------------------------------|
| Permit # 49-2307 | JD Field Services | Green River- Section 15, T2N, R22E |
| Permit # 49-2321 | R.N. Industries   | White River- Section 2, T10S, R24E |
| Permit # 49-2319 | R.N. Industries   | White River- Various Sources       |
| Permit # 49-2320 | R.N. Industries   | Green River- Section 33, T8S, R23E |

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

#### **F. Construction Materials:**

Construction operations will typically be completed with native materials found on location. Construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source (described in site-specific documents). No construction materials will be removed from federal lands without prior approval from the BLM. A source location other than an on-location construction site will be designated either via a map or narrative within the project specific materials provided to the BLM.

#### **G. Methods for Handling Waste:**

All wastes subject to regulation will be handled in compliance with applicable laws to minimize the potential for leaks or spills to the environment. Kerr-McGee also maintains a Spill Control and Countermeasure Plan, which includes notification requirements, including the BLM, for all reportable spills of oil, produced liquids, and hazardous materials.

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Any accidental release, such as a leak or spill in excess of the reportable quantity, as established by 40 CFR Part 117.3, will be reported as per the requirements of CERCLA, Section 102 B. If a release involves petroleum hydrocarbons or produced liquids, Kerr-McGee will comply with the notification requirements of NTL-3A. Drill cuttings and/or drilling fluids will be contained in the reserve/frac pit whether a closed loop system is used or not. Cuttings will be buried in pit(s) upon closure. Unless specifically approved by the BLM, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface precipitation runoff into the pit (via appropriate placement of subsoil storage areas and/or construction of berms, ditches, etc). Should unexpected liquid petroleum hydrocarbons (crude oil or condensate) be encountered during drilling, completions or well testing, liquid petroleum hydrocarbons will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by the BLM. Should timely removal not be feasible, the pit will be netted as soon as practical. Similarly, hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with an impermeable liner. The liner will be a synthetic material 30 mil or thicker. The bottom and side walls of the pit will be void of any sharp rocks that could puncture the liner. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. After evaporation and when dry, the reserve pit liners will be cut off, ripped and/or folded back (as safety considerations allow) as near to the mud surface as possible and buried on location or hauled to a landfill prior to backfilling the pit with a minimum of five feet of soil material.

Where necessary and if conditions (freeboard, etc.) allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per Onshore Order Number 7 (OSO 7). Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Otherwise, fluids disposal locations and associated haul routes, for ROW consideration, are typically depicted on Topo A of individual projects. Revisions to the water source or method of transportation will be subject to written approval from the BLM.

Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after one year from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse (trash and other solid waste including cans, paper, cable, etc.) generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility. Immediately after removal of the drilling rig, all debris and other waste materials not contained within trash receptacles will be collected and removed from the well location.

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet. Siphons, catchments, and absorbent pads



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will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

### **Materials Management**

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Hazardous materials may be contained in some grease or lubricants, solvents, acids, paint, and herbicides, among others as defined above. Kerr-McGee maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances that are used during the course of construction, drilling, completion, and production operations for this project. The transport, use, storage and handling of hazardous materials will follow procedures specified by federal and state regulations. Transportation of hazardous materials to the well location is regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171-180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

Potentially hazardous materials used in the development or operation of wells will be kept in limited quantities on well sites and at the production facilities for short periods of time. Chemicals meeting the criteria for being an acutely hazardous material/substance or meet the quantities criteria per BLM Instruction Memorandum No. 93-344 will not be used.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities (crude oil/condensate, produced water). They may also be kept in limited quantities on drilling sites (barite, diesel fuel, cement, cottonseed hulls etc.) for short periods of time during drilling or completion activities.

Fluids disposal and pipeline/haul routes are depicted on Topo Map A.

Any produced water separated from recoverable condensate from the proposed well will be contained in a water tank and will then be transported by pipeline and/or truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E  
NBU #159 in Sec. 35 T9S R21E  
Ace Oilfield in Sec. 2 T6S R20E  
MC&MC in Sec. 12 T6S R19E  
Pipeline Facility in Sec. 36 T9S R20E  
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E  
Bonanza Evaporation Pond in Sec. 2 T10S R23E

Or to one of the following Kerr-McGee active Salt Water Disposal (SWD) wells:

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NBU 159 SWD in Sec. 35 T9S R21E  
CIGE 112D SWD in Sec. 19 T9S R21E  
CIGE 114 SWD in Sec. 34 T9S R21E  
NBU 921-34K SWD in Sec. 34 T9S R21E  
NBU 921-33F SWD in Sec. 34 T9S R21E

#### **H. Ancillary Facilities:**

No additional ancillary facilities are planned for this location.

#### **I. Well Site Layout:**

The location, orientation and aerial extent of each drill pad, reserve/completion/flare pit (for closed loop or non-closed loop operations), access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure, proposed cuts and fills, and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment depending on whether a closed loop system is used. Surface distance may be less if using closed loop. But in either case, the area of disturbance will not exceed the maximum disturbance outlined in the attached exhibits.

For the protection of livestock and wildlife, all open pits and cellars will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Each well will utilize either a centralized tank battery, centralized fluids management system, or have tanks installed on its pad. Production/ Produced Liquid tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks will be kept reasonably free from surface accumulations of liquid hydrocarbons. The tanks are not to be used for disposal of liquids from additional sources without prior approval of BLM.

#### **J. Plans for Surface Reclamation:**

The surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. Interim reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

##### **Interim Reclamation**

Interim reclamation may include pit evaporation, fluid removal, pit solidification, re-contouring, ripping, spreading top soil, seeding, and/or weed control. Interim reclamation will be performed in accordance with OSO 1, or written notification will be provided to the BLM for approval. Where feasible, drilling locations, reserve pits, or access routes not utilized for production operations will be re-contoured to a natural appearance.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for

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interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left “rough” after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit. Disposal of pit fluids and linings is discussed in Section G.

### **Final Reclamation**

Final reclamation will be performed for unproductive wells and after the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by Kerr-McGee. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. The BLM will be notified prior to commencement of reclamation operations. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring the site to the approximate contour that existed prior to pad construction, final grading will be conducted over the entire surface of the well site and access road. The area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers, where practical. The surface soil material will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep, where practical. The entire area will be uniformly covered with the depressions constructed perpendicular to the natural flow of water.

Reclamation of roads will be performed at the discretion of the BLM. All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded in accordance with the seeding specifications of the BLM.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to the BLM.

### **Measures Common to Interim and Final Reclamation**

Soil preparation will be conducted using a disk for areas in need of more soil preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to reseeding, compacted areas will be scarified by ripping or chiseling to loosen compacted soils, promote water infiltration, and improve soil aeration and root penetration.

Seeding will occur year-round as conditions allow and will typically be accomplished through the use of a no-till rangeland style seed drill with a “picker box” in order to seed “fluffy” seed. Where drill seeding is not the preferred method, seed will be broadcast and then raked into the ground at double the rate of drill seeding. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The seed mixes will be selected from a list provided by or approved by the BLM, or a specific seed mix will be proposed by Kerr-McGee to the BLM and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be maintained by Kerr-McGee. Every effort will be made to obtain “cheat grass free seed”.

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Seed Mix to be used for Well Site, Access Road, and Pipeline (as applicable):

| <b>Bonanza Area Mix</b>  | <b>Pure Live Seed lbs/acre</b> |
|--------------------------|--------------------------------|
| Crested Wheat (Hycrest)  | 2                              |
| Bottlebrush Squirreltail | 1                              |
| Western Wheatgrass       | 1                              |
| Indian Ricegrass         | 1                              |
| Fourwing Saltbush        | 2                              |
| Shadscale                | 2                              |
| Forage Kochia            | 0.25                           |
| Rocky Mountain Bee       | 0.5                            |
| <b>Total</b>             | <b>9.75</b>                    |

Additional soil amendments and/or stabilization may be required on sites with poor soils and/or excessive erosion potential. Where severe erosion can become a problem and/or the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. Slopes will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to: erosion control blankets, hydro-mulch, and/or bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage. Soil amendments such as "Sustain" (an organic fertilizer that will be applied at the rate 1,800 – 2,100 lbs/acre with seed) may also be dry broadcast or applied with hydro-seeding equipment.

#### **Weed Control**

All weed management will be done in accordance with the Vernal BLM Surface Disturbance Weed Policy. Noxious weeds will be controlled, as applicable, on project areas. Monitoring and management of noxious and/or invasive weeds of concern will be completed annually until the project is deemed successfully reclaimed by the surface management agency and/or owner according to the Anadarko Integrated Weed Management Plan. Noxious weed infestations will be mapped using a GPS unit and submitted to the BLM with information required in the Vernal BLM Surface Disturbance Weed Policy. If herbicide is to be applied it will be done according to an approved Pesticide Use Permit (PUP), inclusive of applicable locations. All pesticide applications will be recorded using a Pesticide Application Record (PAR) and will be submitted along with a Pesticide Use Report (PUR) annually prior to Dec. 31.

#### **Monitoring**

Monitoring of reclaimed project areas will be completed annually during the growing season and actions to ensure reclamation success will be taken as needed. During the first two growing seasons an ocular methodology will be used to determine the success of the reclamation activities. During the 3rd growing season a 200 point line intercept (quantitative) methodology will be used to obtain basal cover. The goal is to have the reclaimed area reach 30% basal cover when compared to the reference site. If after three growing seasons the area has not reached 30% basal cover, additional reclamation activities may be necessary. Monitoring will continue until the reclaimed area reaches 75% basal cover of desirable vegetation when compared to the reference site. (Green River District Reclamation Guidelines)

All monitoring reports will be submitted electronically to the Vernal BLM in the form of a geo-database no later than March 1st of the calendar year following the data collection.

#### **K. Surface/Mineral Ownership:**

United States of America  
 Bureau of Land Management  
 170 South 500 East  
 Vernal, UT 84078  
 (435)781-4400

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## L. Other Information:

### Onsite Specifics:

- Facilities: Will be painted Shadow Grey
- Top Soil: Need to save 6" topsoil

### Cultural and Paleontological Resources

All personnel are strictly prohibited from collecting artifacts, any paleontological specimens or fossils, and from disturbing any significant cultural resources in the area. If artifacts, fossils, or any culturally sensitive materials are exposed or identified in the area of construction, all construction operations that would affect the newly discovered resource will cease, and Kerr-McGee will provide immediate notification to the BLM.

### Resource Reports:

A Class I literature survey was completed on April 23, 2010 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 10-056.

A paleontological reconnaissance survey was completed on May 13, 2010 by SWCA Environmental Consultants. For additional details please refer to report UT10-14314-13.

Biological field survey was completed on April 21, 2010 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-205.

### Proposed Action Annual Emissions Tables:

| Table 1: Proposed Action Annual Emissions (tons/year) <sup>1</sup> |             |            |          |
|--|-------------|------------|----------|
| Pollutant  | Development | Production | Total    |
| NO <sub>x</sub>  | 3.8         | 0.12       | 3.92     |
| CO   | 2.2         | 0.11       | 2.31     |
| VOC  | 0.1         | 4.9        | 5        |
| SO <sub>2</sub>  | 0.005       | 0.0043     | 0.0093   |
| PM <sub>10</sub>   | 1.7         | 0.11       | 1.81     |
| PM <sub>2.5</sub>  | 0.4         | 0.025      | 0.425    |
| Benzene  | 2.2E-03     | 0.044      | 0.046    |
| Toluene  | 1.6E-03     | 0.103      | 0.105    |
| Ethylbenzene   | 3.4E-04     | 0.005      | 0.005    |
| Xylene   | 1.1E-03     | 0.076      | 0.077    |
| n-Hexane   | 1.7E-04     | 0.145      | 0.145    |
| Formaldehyde   | 1.3E-02     | 8.64E-05   | 1.31E-02 |

<sup>1</sup> Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

| Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison |   |  |   |
|--|---|--|---|
| Species  | Proposed Action Production Emissions (ton/yr) | 2012 Uintah Basin Emission Inventory <sup>a</sup> (ton/yr) | Percentage of Proposed Action to WRAP Phase III |
| NO <sub>x</sub>  | 19.6  | 16,547   | 0.12%   |
| VOC  | 25  | 127,495  | 0.02%   |

<sup>a</sup> [http://www.wrapair.org/forums/ogwg/PhaseIII\\_Inventory.html](http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html)

Uintah Basin Data

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**M. Lessee's or Operators' Representative & Certification:**

Gina T. Becker  
Regulatory Analyst II  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6086

Tommy Thompson  
General Manager, Drilling  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.



Gina T. Becker

October 12, 2011

Date



Joseph D. Johnson  
LANDMAN

Kerr-McGee Oil & Gas Onshore LP  
P.O. Box 173779  
Denver, CO 80217-3779

June 8, 2011

Ms. Diana Mason  
Division of Oil, Gas and Mining  
P.O. Box 145801  
Salt Lake City, UT 84114-6100

Re: Exception Location R649-3-3 and Directional Drilling R649-3-11  
Bonanza 1023-5I1CS  
T10S- R23E  
Section 5: NESE/NESE  
1634' FSL, 1030' FEL (surface)  
2141' FSL, 460' FEL (bottom hole)  
Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-3 and Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- Kerr-McGee's Bonanza 1023-5I1CS is located within the area covered by Docket No. 2008-011 authorizing the equivalent of an approximate 10-acre well density pattern, and requiring approval for wells drilled at an exception location and wells drilled directionally in accordance with the referenced rules.
- Kerr-McGee is permitting this well at this location for geological reasons. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to minimize surface disturbance.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to Rule R6493-3 and Rule R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

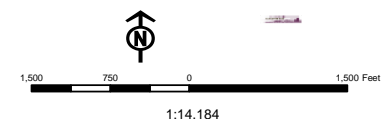
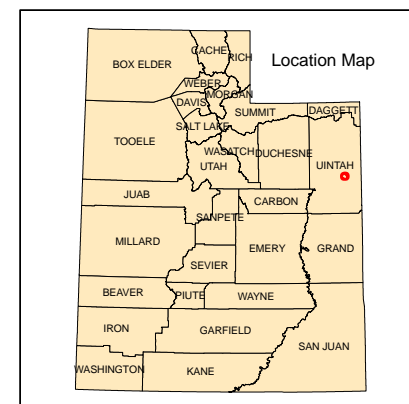
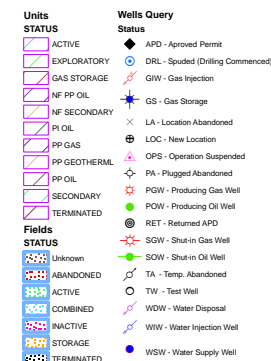
A handwritten signature in blue ink, appearing to read 'J.D.J.', with a horizontal line underneath.

Joseph D. Johnson  
Landman

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Map Produced by Diana Mason





## WORKSHEET APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 10/17/2011**API NO. ASSIGNED:** 43047520600000**WELL NAME:** BONANZA 1023-5I1CS**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)**PHONE NUMBER:** 720 929-6086**CONTACT:** Gina Becker**PROPOSED LOCATION:** NESE 05 100S 230E**Permit Tech Review:** ☒**SURFACE:** 1634 FSL 1030 FEL**Engineering Review:** ☒**BOTTOM:** 2141 FSL 0460 FEL**Geology Review:** ☒**COUNTY:** UINTAH**LATITUDE:** 39.97519**LONGITUDE:** -109.34503**UTM SURF EASTINGS:** 641322.00**NORTHINGS:** 4426315.00**FIELD NAME:** NATURAL BUTTES**LEASE TYPE:** 1 - Federal**LEASE NUMBER:** UTU33433**PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE**SURFACE OWNER:** 1 - Federal**COALBED METHANE:** NO**RECEIVED AND/OR REVIEWED:**☒ **PLAT**☒ **Bond:** FEDERAL - WYB000291☐ **Potash**☐ **Oil Shale 190-5**☐ **Oil Shale 190-3**☐ **Oil Shale 190-13**☒ **Water Permit:** 43-8496☐ **RDCC Review:**☐ **Fee Surface Agreement**☒ **Intent to Commingle****Commingle Approved****LOCATION AND SITING:**☐ **R649-2-3.****Unit:**☐ **R649-3-2. General**☐ **R649-3-3. Exception**☒ **Drilling Unit****Board Cause No:** Cause 179-14**Effective Date:** 6/12/2008**Siting:** 460' Fr Ext Drl Unit Boundary☒ **R649-3-11. Directional Drill****Comments:** Presite Completed**Stipulations:**  
3 - Commingle - ddoucet  
4 - Federal Approval - dmason  
15 - Directional - dmason**RECEIVED: October 26, 2011**



GARY R. HERBERT  
*Governor*

GREGORY S. BELL  
*Lieutenant Governor*

## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

### Permit To Drill

\*\*\*\*\*

**Well Name:** BONANZA 1023-511CS  
**API Well Number:** 43047520600000  
**Lease Number:** UTU33433  
**Surface Owner:** FEDERAL  
**Approval Date:** 10/26/2011

**Issued to:**

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

**Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 179-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

**Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

**Commingling:**

In accordance with Board Cause No. 179-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

**General:**

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

**Conditions of Approval:**

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

**Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available)  
OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <http://oilgas.ogm.utah.gov>

**Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

**Approved By:**

A handwritten signature in black ink, appearing to read "John Rogers", written over a horizontal line.

For John Rogers  
Associate Director, Oil & Gas

**UDOGM**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**RECEIVED**

JUL 22 2011

FORM APPROVED  
OMB No. 1004-0136  
Expires July 31, 2010**APPLICATION FOR PERMIT TO DRILL OR REENTER****BLM**

|   |   |   |
|---|---|---|
| 1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER  |   | 5. Lease Serial No.<br>UTU33433   |
| 1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone                              |   | 6. If Indian, Allottee or Tribe Name  |
| 2. Name of Operator<br>KERR-MCGEE OIL & GAS ONSHORE<br>Contact: GINA T BECKER<br>Email: GINA.BECKER@ANADARKO.COM  |   | 7. If Unit or CA Agreement, Name and No.                                    |
| 3a. Address<br>P.O. BOX 173779<br>DENVER, CO 80202-3779   | 3b. Phone No. (include area code)<br>Ph: 720-929-6086<br>Fx: 720-929-7086 | 8. Lease Name and Well No.<br>BONANZA 1023-511CS                            |
| 4. Location of Well (Report location clearly and in accordance with any State requirements. *)<br>At surface NESE 1634FSL 1030FEL 39.975207 N Lat, 109.345003 W Lon<br>At proposed prod. zone NESE 2141FSL 460FEL 39.976603 N Lat, 109.342966 W Lon |   | 9. API Well No.<br>43-047 52060   |
| 14. Distance in miles and direction from nearest town or post office*<br>APPROXIMATELY 48 MILES SOUTHEAST OF VERNAL, UTAH   |   | 10. Field and Pool, or Exploratory<br>BONANZA                               |
| 15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)<br>460   | 16. No. of Acres in Lease<br>1923.00                                      | 11. Sec., T., R., M., or Blk. and Survey or Area<br>Sec 5 T10S R23E Mer SLB |
| 18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.<br>2141   | 19. Proposed Depth<br>8486 MD<br>8370 TVD                                 | 12. County or Parish<br>UINTAH  |
| 21. Elevations (Show whether DF, KB, RT, GL, etc.)<br>5299 GL   | 22. Approximate date work will start<br>12/31/2011                        | 13. State<br>UT   |
| 23. Estimated duration<br>60-90 DAYS  |   | 17. Spacing Unit dedicated to this well                                     |
| 20. BLM/BIA Bond No. on file<br>WYB000291   |   |   |

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- |   |  |
|---|--|
| 1. Well plat certified by a registered surveyor.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan.   | 5. Operator certification  |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

|   |  |                     |
|---|--|---------------------|
| 25. Signature<br>(Electronic Submission)                      | Name (Printed/Typed)<br>GINA T BECKER Ph: 720-929-6086 | Date<br>07/05/2011  |
| Title<br>REGULATORY ANALYST II                                |  |                     |
| Approved by (Signature)<br>                                   | Name (Printed/Typed)<br>Jerry Kenczka                  | Date<br>MAR 02 2011 |
| Title<br>Assistant Field Manager<br>Lands & Mineral Resources | Office<br>VERNAL FIELD OFFICE                          |                     |

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

**CONDITIONS OF APPROVAL ATTACHED**

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Additional Operator Remarks (see next page)

Electronic Submission #112247 verified by the BLM Well Information System  
For KERR-MCGEE OIL & GAS ONSHORE, sent to the Vernal**NOTICE OF APPROVAL****RECEIVED**

MAR 14 2012

DIV. OF OIL, GAS &amp; MINING

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*





UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
VERNAL FIELD OFFICE

170 South 500 East

VERNAL, UT 84078

(435) 781-4401



**CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL**

|          |                                  |            |  |
|----------|----------------------------------|------------|--|
| Company: | Kerr McGee Oil & Gas Onshore, LP | Location:  | NESE, Sec. 5, T10S, R23E (S)<br>NESE, Sec. 5, T10S, R23E (B) |
| Well No: | Bonanza 1023-511CS               | Lease No:  | UTU-33433  |
| API No:  | 43-047-52060                     | Agreement: | N/A  |

OFFICE NUMBER: (435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR  
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

**NOTIFICATION REQUIREMENTS**

|   |   |  |
|---|---|--|
| Location Construction<br>(Notify Environmental Scientist)       | - | Forty-Eight (48) hours prior to construction of location and access roads.   |
| Location Completion<br>(Notify Environmental Scientist)         | - | Prior to moving on the drilling rig.   |
| Spud Notice<br>(Notify Petroleum Engineer)                      | - | Twenty-Four (24) hours prior to spudding the well.   |
| Casing String & Cementing<br>(Notify Supv. Petroleum Tech.)     | - | Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <a href="mailto:ut_vn_opreport@blm.gov">ut_vn_opreport@blm.gov</a> . |
| BOP & Related Equipment Tests<br>(Notify Supv. Petroleum Tech.) | - | Twenty-Four (24) hours prior to initiating pressure tests.   |
| First Production Notice<br>(Notify Petroleum Engineer)          | - | Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.             |

***SURFACE USE PROGRAM  
CONDITIONS OF APPROVAL (COAs)***

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.

**SITE SPECIFIC COAs**

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horse power must not emit more than 2 grams of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower-hour.
- All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gram of NO<sub>x</sub> per horsepower-hour.
- Construction or drilling is not allowed for the Bonanza 1023-5M and Bonanza 1023-5P pads from January 1 – August 31 to minimize impacts during golden eagle nesting.
- If it is anticipated that construction or drilling will occur during the given timing restriction, a BLM or qualified biologist shall be notified to conduct surveys for raptors. Depending upon the results of the surveys, permission to proceed may or may not be granted by the Authorized Officer.
- All reclamation will comply with the Green River Reclamation Guidelines
- All vehicles and equipment shall be cleaned either through power-washing, or other approved method, if the vehicles or equipment were previously operated outside the Uinta Basin, to prevent weed seed introduction.
- All disturbance areas shall be monitored for noxious weeds annually, for a minimum of three growing seasons following completion of project or until desirable vegetation is established
- Noxious and invasive weeds will be controlled throughout the area of project disturbance.

- Noxious weeds will be inventoried and reported to BLM in the annual reclamation report. Where an integrated pest management program is applicable, coordination has been undertaken with the state and local management program (if existing). A copy of the pest management plan will be submitted for each project.
- A pesticide use permit (PUP) will be obtained for the project, if applicable.
- A permitted paleontologist is to be present to monitor construction at well pads 1023-5C, 5D, 5K, 5L, 5M and 5P during all surface disturbing activities: examples include the following building of the well pad, access road, and pipelines.
- The best method to avoid entrainment is to pump from an off-channel location – one that does not connect to the river during high spring flows. An infiltration gallery constructed in a BLM and Service approved location is best.
- If the pump head is located in the river channel where larval fish are known to occur, the following measures apply:
  - a. do not situate the pump in a low-flow or no-flow area as these habitats tend to concentrate larval fishes;
  - b. limit the amount of pumping, to the greatest extent possible, during that period of the year when larval fish may be present (April 1 to August 31); and
  - c. limit the amount of pumping, to the greatest extent possible, during the pre-dawn hours as larval drift studies indicate that this is a period of greatest daily activity.
- Screen all pump intakes with 3/32" mesh material.
- Approach velocities for intake structures will follow the National Marine Fisheries Service's document "Fish Screening Criteria for Anadromous Salmonids". For projects with an in-stream intake that operate in stream reaches where larval fish may be present, the approach velocity will not exceed 0.33 feet per second (ft/s).
- Report any fish impinged on the intake screen to the Service (801.975.3330) and the Utah Division of Wildlife Resources:
  - Northeastern Region
  - 152 East 100 North, Vernal, UT 84078
  - Phone: (435) 781-9453
- Discovery Stipulation: Re-initiation of section 7 consultation with the USFWS will be sought immediately if any loss of plants or occupied habitat for Pariette cactus or Uinta Basin hookless cactus is anticipated as a result of project activities.

***DOWNHOLE PROGRAM  
CONDITIONS OF APPROVAL (COAs)***

**SITE SPECIFIC DRILLING PLAN COA's:**

- A copy of Kerr McGee's Standard Operating Practices (SOP version: dated 7/17/08 and approved 7/28/08) shall be on location.
- Surface casing cement shall be brought to surface.
- Production casing cement shall be brought 200' up and into the surface casing.

**All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to.** The following items are emphasized:

**DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned.
- Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.



- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well in LAS format to UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

## OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at [www.ONRR.gov](http://www.ONRR.gov).
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

## BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG  
Submitted By J. Scharnowske Phone Number 720.929.6304  
Well Name/Number BONANZA 1023-5I1CS  
Qtr/Qtr NESE Section 5 Township 10S Range 23E  
Lease Serial Number UTU33433  
API Number 4304752060

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 05/21/2012 11:00 HRS AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☒ Surface Casing  
☐ Intermediate Casing  
☐ Production Casing  
☐ Liner  
☐ Other

Date/Time 06/11/2012 08:00 HRS AM ☐ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point  
☐ BOPE test at intermediate casing point  
☐ 30 day BOPE test  
☐ Other

RECEIVED

MAY 18 2012

DIV. OF OIL, GAS &amp; MINING

Date/Time \_\_\_\_\_ AM ☐ PM ☐

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT

435.828.0986 OR LOVEL YOUNG AT 435.781.7051



|  |  |  |
|--|--|--|
| <b>STATE OF UTAH</b><br>DEPARTMENT OF NATURAL RESOURCES<br>DIVISION OF OIL, GAS, AND MINING  |  | <b>FORM 9</b>  |
| <b>SUNDRY NOTICES AND REPORTS ON WELLS</b><br><br>Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals. |  | <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b><br>UTU33433 |
| <b>1. TYPE OF WELL</b><br>Gas Well   |  | <b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>               |
| <b>2. NAME OF OPERATOR:</b><br>KERR-MCGEE OIL & GAS ONSHORE, L.P.  |  | <b>7. UNIT or CA AGREEMENT NAME:</b>                       |
| <b>3. ADDRESS OF OPERATOR:</b><br>P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779  |  | <b>8. WELL NAME and NUMBER:</b><br>BONANZA 1023-5I1CS      |
| <b>4. LOCATION OF WELL</b><br><b>FOOTAGES AT SURFACE:</b><br>1634 FSL 1030 FEL<br><b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b><br>Qtr/Qtr: NESE Section: 05 Township: 10.0S Range: 23.0E Meridian: S  |  | <b>9. API NUMBER:</b><br>43047520600000                    |
| <b>PHONE NUMBER:</b><br>720 929-6514   |  | <b>9. FIELD and POOL or WILDCAT:</b><br>NATURAL BUTTES     |
| <b>COUNTY:</b><br>UINTAH   |  | <b>STATE:</b><br>UTAH                                      |
| 11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA  |  |  |
| <b>TYPE OF SUBMISSION</b>  | <b>TYPE OF ACTION</b>  |  |
| <input type="checkbox"/> NOTICE OF INTENT<br>Approximate date work will start:   | <input type="checkbox"/> ACIDIZE   |  |
| <input type="checkbox"/> SUBSEQUENT REPORT<br>Date of Work Completion:   | <input type="checkbox"/> ALTER CASING                                      |  |
| <input checked="" type="checkbox"/> SPUD REPORT<br>Date of Spud:<br>5/21/2012  | <input type="checkbox"/> CASING REPAIR                                     |  |
| <input type="checkbox"/> DRILLING REPORT<br>Report Date:   | <input type="checkbox"/> CHANGE TO PREVIOUS PLANS                          |  |
|  | <input type="checkbox"/> CHANGE WELL STATUS                                |  |
|  | <input type="checkbox"/> CHANGE WELL NAME                                  |  |
|  | <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS                    |  |
|  | <input type="checkbox"/> CONVERT WELL TYPE                                 |  |
|  | <input type="checkbox"/> DEEPEN  |  |
|  | <input type="checkbox"/> FRACTURE TREAT                                    |  |
|  | <input type="checkbox"/> NEW CONSTRUCTION                                  |  |
|  | <input type="checkbox"/> OPERATOR CHANGE                                   |  |
|  | <input type="checkbox"/> PLUG AND ABANDON                                  |  |
|  | <input type="checkbox"/> PLUG BACK   |  |
|  | <input type="checkbox"/> PRODUCTION START OR RESUME                        |  |
|  | <input type="checkbox"/> RECLAMATION OF WELL SITE                          |  |
|  | <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION                    |  |
|  | <input type="checkbox"/> REPERFORATE CURRENT FORMATION                     |  |
|  | <input type="checkbox"/> SIDETRACK TO REPAIR WELL                          |  |
|  | <input type="checkbox"/> TEMPORARY ABANDON                                 |  |
|  | <input type="checkbox"/> TUBING REPAIR                                     |  |
|  | <input type="checkbox"/> VENT OR FLARE                                     |  |
|  | <input type="checkbox"/> WATER DISPOSAL                                    |  |
|  | <input type="checkbox"/> WATER SHUTOFF                                     |  |
|  | <input type="checkbox"/> SI TA STATUS EXTENSION                            |  |
|  | <input type="checkbox"/> APD EXTENSION                                     |  |
|  | <input type="checkbox"/> WILDCAT WELL DETERMINATION                        |  |
|  | <input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/> |  |
| 12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.<br>MIRU TRIPPLE A BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'.<br>RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD<br>WELL ON 05/21/2012 AT 1100 HRS.        |  |  |
| Accepted by the<br>Utah Division of<br>Oil, Gas and Mining<br><b>FOR RECORD ONLY</b><br>May 24, 2012   |  |  |
| <b>NAME (PLEASE PRINT)</b><br>Sheila Wopsock   | <b>PHONE NUMBER</b><br>435 781-7024  | <b>TITLE</b><br>Regulatory Analyst                         |
| <b>SIGNATURE</b><br>N/A  | <b>DATE</b><br>5/24/2012   |  |

|  |  |  |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
|--|--|--|----------------------------------|---------------------------------------|--|--|--|---|---|---|--|---------------------------------|---|---|--|---|------------------------------------|---|---|---|--|---|--|--|--|---|--|---|--|---|--------------------------------|---|
| <b>STATE OF UTAH</b><br>DEPARTMENT OF NATURAL RESOURCES<br>DIVISION OF OIL, GAS, AND MINING  |  | <b>FORM 9</b>  |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <b>SUNDRY NOTICES AND REPORTS ON WELLS</b><br><br>Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.   |  | <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b><br>UTU33433   |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <b>1. TYPE OF WELL</b><br>Gas Well   |  | <b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>   |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <b>2. NAME OF OPERATOR:</b><br>KERR-MCGEE OIL & GAS ONSHORE, L.P.  |  | <b>7. UNIT or CA AGREEMENT NAME:</b>   |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <b>3. ADDRESS OF OPERATOR:</b><br>P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779  |  | <b>8. WELL NAME and NUMBER:</b><br>BONANZA 1023-511CS  |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <b>4. LOCATION OF WELL</b><br><b>FOOTAGES AT SURFACE:</b><br>1634 FSL 1030 FEL<br><b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b><br>Qtr/Qtr: NESE Section: 05 Township: 10.0S Range: 23.0E Meridian: S  |  | <b>9. API NUMBER:</b><br>43047520600000  |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>   |  | <b>9. FIELD and POOL or WILDCAT:</b><br>NATURAL BUTTES   |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <b>TYPE OF SUBMISSION</b><br><br><input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b><br>Approximate date work will start:<br>5/16/2012<br><br><input type="checkbox"/> <b>SUBSEQUENT REPORT</b><br>Date of Work Completion:<br><br><input type="checkbox"/> <b>SPUD REPORT</b><br>Date of Spud:<br><br><input type="checkbox"/> <b>DRILLING REPORT</b><br>Report Date: | <b>TYPE OF ACTION</b><br><br><table style="width: 100%;"> <tr> <td><input type="checkbox"/> ACIDIZE</td> <td><input type="checkbox"/> ALTER CASING</td> <td><input type="checkbox"/> CASING REPAIR</td> </tr> <tr> <td><input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS</td> <td><input type="checkbox"/> CHANGE TUBING</td> <td><input type="checkbox"/> CHANGE WELL NAME</td> </tr> <tr> <td><input type="checkbox"/> CHANGE WELL STATUS</td> <td><input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS</td> <td><input type="checkbox"/> CONVERT WELL TYPE</td> </tr> <tr> <td><input type="checkbox"/> DEEPEN</td> <td><input type="checkbox"/> FRACTURE TREAT</td> <td><input type="checkbox"/> NEW CONSTRUCTION</td> </tr> <tr> <td><input type="checkbox"/> OPERATOR CHANGE</td> <td><input type="checkbox"/> PLUG AND ABANDON</td> <td><input type="checkbox"/> PLUG BACK</td> </tr> <tr> <td><input type="checkbox"/> PRODUCTION START OR RESUME</td> <td><input type="checkbox"/> RECLAMATION OF WELL SITE</td> <td><input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION</td> </tr> <tr> <td><input type="checkbox"/> REPERFORATE CURRENT FORMATION</td> <td><input type="checkbox"/> SIDETRACK TO REPAIR WELL</td> <td><input type="checkbox"/> TEMPORARY ABANDON</td> </tr> <tr> <td><input type="checkbox"/> TUBING REPAIR</td> <td><input type="checkbox"/> VENT OR FLARE</td> <td><input type="checkbox"/> WATER DISPOSAL</td> </tr> <tr> <td><input type="checkbox"/> WATER SHUTOFF</td> <td><input type="checkbox"/> SI TA STATUS EXTENSION</td> <td><input type="checkbox"/> APD EXTENSION</td> </tr> <tr> <td><input type="checkbox"/> WILDCAT WELL DETERMINATION</td> <td><input type="checkbox"/> OTHER</td> <td>OTHER: <input style="width: 100px;" type="text"/></td> </tr> </table> |  | <input type="checkbox"/> ACIDIZE | <input type="checkbox"/> ALTER CASING | <input type="checkbox"/> CASING REPAIR | <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS | <input type="checkbox"/> CHANGE TUBING | <input type="checkbox"/> CHANGE WELL NAME | <input type="checkbox"/> CHANGE WELL STATUS | <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS | <input type="checkbox"/> CONVERT WELL TYPE | <input type="checkbox"/> DEEPEN | <input type="checkbox"/> FRACTURE TREAT | <input type="checkbox"/> NEW CONSTRUCTION | <input type="checkbox"/> OPERATOR CHANGE | <input type="checkbox"/> PLUG AND ABANDON | <input type="checkbox"/> PLUG BACK | <input type="checkbox"/> PRODUCTION START OR RESUME | <input type="checkbox"/> RECLAMATION OF WELL SITE | <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION | <input type="checkbox"/> REPERFORATE CURRENT FORMATION | <input type="checkbox"/> SIDETRACK TO REPAIR WELL | <input type="checkbox"/> TEMPORARY ABANDON | <input type="checkbox"/> TUBING REPAIR | <input type="checkbox"/> VENT OR FLARE | <input type="checkbox"/> WATER DISPOSAL | <input type="checkbox"/> WATER SHUTOFF | <input type="checkbox"/> SI TA STATUS EXTENSION | <input type="checkbox"/> APD EXTENSION | <input type="checkbox"/> WILDCAT WELL DETERMINATION | <input type="checkbox"/> OTHER | OTHER: <input style="width: 100px;" type="text"/> |
| <input type="checkbox"/> ACIDIZE   | <input type="checkbox"/> ALTER CASING  | <input type="checkbox"/> CASING REPAIR   |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS   | <input type="checkbox"/> CHANGE TUBING   | <input type="checkbox"/> CHANGE WELL NAME  |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <input type="checkbox"/> CHANGE WELL STATUS  | <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  | <input type="checkbox"/> CONVERT WELL TYPE   |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <input type="checkbox"/> DEEPEN  | <input type="checkbox"/> FRACTURE TREAT  | <input type="checkbox"/> NEW CONSTRUCTION  |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <input type="checkbox"/> OPERATOR CHANGE   | <input type="checkbox"/> PLUG AND ABANDON  | <input type="checkbox"/> PLUG BACK   |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <input type="checkbox"/> PRODUCTION START OR RESUME  | <input type="checkbox"/> RECLAMATION OF WELL SITE  | <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <input type="checkbox"/> REPERFORATE CURRENT FORMATION   | <input type="checkbox"/> SIDETRACK TO REPAIR WELL  | <input type="checkbox"/> TEMPORARY ABANDON   |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <input type="checkbox"/> TUBING REPAIR   | <input type="checkbox"/> VENT OR FLARE   | <input type="checkbox"/> WATER DISPOSAL  |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <input type="checkbox"/> WATER SHUTOFF   | <input type="checkbox"/> SI TA STATUS EXTENSION  | <input type="checkbox"/> APD EXTENSION   |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <input type="checkbox"/> WILDCAT WELL DETERMINATION  | <input type="checkbox"/> OTHER   | OTHER: <input style="width: 100px;" type="text"/>  |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b><br><br>THE OPERATOR REQUESTS APPROVAL FOR A FIT WAIVER, A CLOSED LOOP DRILLING OPTION, AND A PRODUCTION CASING CHANGE. ALL OTHER ASPECTS OF THE PREVIOUSLY APPROVED DRILLING PLAN WILL NOT CHANGE. PLEASE SEE THE ATTACHMENT. THANK YOU.       |  |  |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <b>NAME (PLEASE PRINT)</b><br>Cara Mahler  |  | <b>PHONE NUMBER</b><br>720 929-6029  |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <b>SIGNATURE</b><br>N/A  |  | <b>TITLE</b><br>Regulatory Analyst I   |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |
| <b>DATE</b><br>5/16/2012   |  | <b>Accepted by the</b><br><b>Utah Division of</b><br><b>Oil, Gas and Mining</b><br><br><b>Date:</b> May 24, 2012<br><b>By:</b> |                                  |                                       |  |  |  |   |   |   |  |                                 |   |   |  |   |                                    |   |   |   |  |   |  |  |  |   |  |   |  |   |                                |   |

**Kerr-McGee Oil & Gas Onshore. L.P.****BONANZA 1023-5I1CS**

Surface: 1634 FSL / 1030 FEL NESE  
BHL: 2141 FSL / 460 FEL NESE

Section 5 T10S R23E

Uintah County, Utah  
Mineral Lease: UTU-33433

**ONSHORE ORDER NO. 1****DRILLING PROGRAM**

1. & 2. **Estimated Tops of Important Geologic Markers:**  
**Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

| <u>Formation</u> | <u>Depth</u> | <u>Resource</u> |
|------------------|--------------|-----------------|
| Uinta            | 0 - Surface  |                 |
| Green River      | 1,226'       |                 |
| Birds Nest       | 1,469'       | Water           |
| Mahogany         | 1,831'       | Water           |
| Wasatch          | 4,185'       | Gas             |
| Mesaverde        | 6,201'       | Gas             |
| Sego             | 8,370'       | Gas             |
| TVD              | 8,370'       |                 |
| TD               | 8,486'       |                 |

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Drilling Program

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

**7. Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 8370' TVD, approximately equals  
 5,357 psi 0.64 psi/ft = actual bottomhole gradient

---

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,504 psi (bottom hole pressure  
 minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-

(0.22 psi/ft-partial evac gradient x TVD of next csg point))

**8. Anticipated Starting Dates:**

Drilling is planned to commence immediately upon approval of this application.

**9. Variances:**

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

**Background**

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.



Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

#### **Variance for BOPE Requirements**

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

#### **Variance for Mud Material Requirements**

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

#### **Variance for Special Drilling Operation (surface equipment placement) Requirements**

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

#### **Variance for FIT Requirements**

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

#### **Conclusion**

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

#### **10. Other Information:**

Please refer to the attached Drilling Program.



|                   |   |           |            |               |       |             |                    |     |               |
|-------------------|---|-----------|------------|---------------|-------|-------------|--------------------|-----|---------------|
| COMPANY NAME      | KERR-McGEE OIL & GAS ONSHORE LP   |           |            |               |       | DATE        | May 16, 2012       |     |               |
| WELL NAME         | <b>BONANZA 1023-51CS</b>  |           |            |               |       | TD          | 8,370'             | TVD | 8,486' MD     |
| FIELD             | <u>Natural Buttes</u>   |           | COUNTY     | <u>Uintah</u> | STATE | <u>Utah</u> | FINISHED ELEVATION |     | <u>5296.8</u> |
| SURFACE LOCATION  | NESE  | 1634 FSL  | 1030 FEL   | Sec 5         | T 10S | R 23E       |                    |     |               |
|                   | Latitude:   | 39.975207 | Longitude: | -109.345003   |       |             | NAD 83             |     |               |
| BTM HOLE LOCATION | NESE  | 2141 FSL  | 460 FEL    | Sec 5         | T 10S | R 23E       |                    |     |               |
|                   | Latitude:   | 39.976603 | Longitude: | -109.342966   |       |             | NAD 83             |     |               |
| OBJECTIVE ZONE(S) | Wasatch/Mesaverde   |           |            |               |       |             |                    |     |               |
| ADDITIONAL INFO   | Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept. |           |            |               |       |             |                    |     |               |





## KERR-McGEE OIL & GAS ONSHORE LP

### DRILLING PROGRAM

**CASING PROGRAM**

|            | SIZE   | INTERVAL        | WT.   | GR.   | CPLG. | DESIGN FACTORS |          |         |         |
|------------|--------|-----------------|-------|-------|-------|----------------|----------|---------|---------|
|            |        |                 |       |       |       | LTC            |          | DQX     |         |
|            |        |                 |       |       |       | BURST          | COLLAPSE | TENSION |         |
| CONDUCTOR  | 14"    | 0-40'           |       |       |       | 3,390          | 1,880    | 348,000 | N/A     |
| SURFACE    | 8-5/8" | 0 to 2,280      | 28.00 | IJ-55 | LTC   | 2.37           | 1.76     | 6.22    | N/A     |
|            |        |                 |       |       |       | 7,780          | 6,350    | 223,000 | 267,035 |
| PRODUCTION | 4-1/2" | 0 to 5,000      | 11.60 | I-80  | DQX   | 1.11           | 1.17     |         | 3.35    |
|            |        |                 |       |       |       | 7,780          | 6,350    | 223,000 | 267,035 |
|            | 4-1/2" | 5,000 to 8,486' | 11.60 | I-80  | LTC   | 1.11           | 1.17     | 6.82    |         |

**Surface Casing:**

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoys.Fact. of water)

**Production casing:**

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoys.Fact. of water)

**CEMENT PROGRAM**

|            |                      | FT. OF FILL | DESCRIPTION  | SACKS   | EXCESS | WEIGHT |  | YIELD |
|------------|----------------------|-------------|--|---------|--------|--------|--|-------|
| SURFACE    | LEAD                 | 500'        | Premium cmt + 2% CaCl  | 180     | 60%    | 15.80  |  | 1.15  |
|            |                      |             | + 0.25 pps flocele   |         |        |        |  |       |
| Option 1   |                      |             |  |         |        |        |  |       |
|            | TOP OUT CMT (6 jobs) | 1,200'      | 20 gals sodium silicate + Premium cmt                                    | 270     | 0%     | 15.80  |  | 1.15  |
|            |                      |             | + 2% CaCl + 0.25 pps flocele   |         |        |        |  |       |
| SURFACE    |                      |             | NOTE: If well will circulate water to surface, option 2 will be utilized |         |        |        |  |       |
| Option 2   | LEAD                 | 1,780'      | 65/35 Poz + 6% Gel + 10 pps gilsonite                                    | 160     | 35%    | 11.00  |  | 3.82  |
|            |                      |             | + 0.25 pps Flocele + 3% salt BWOW  |         |        |        |  |       |
|            | TAIL                 | 500'        | Premium cmt + 2% CaCl  | 150     | 35%    | 15.80  |  | 1.15  |
|            |                      |             | + 0.25 pps flocele   |         |        |        |  |       |
|            | TOP OUT CMT          | as required | Premium cmt + 2% CaCl  | as req. |        | 15.80  |  | 1.15  |
| PRODUCTION | LEAD                 | 3,676'      | Premium Lite II +0.25 pps  | 290     | 35%    | 12.00  |  | 3.38  |
|            |                      |             | celloflake + 5 pps gilsonite + 10% gel                                   |         |        |        |  |       |
|            |                      |             | + 0.5% extender  |         |        |        |  |       |
|            | TAIL                 | 4,810'      | 50/50 Poz/G + 10% salt + 2% gel  | 1,140   | 35%    | 14.30  |  | 1.31  |
|            |                      |             | + 0.1% R-3   |         |        |        |  |       |

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

**FLOAT EQUIPMENT & CENTRALIZERS**

|            |  |
|------------|--|
| SURFACE    | Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe |
|            |  |
| PRODUCTION | Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well.                   |
|            | 1 centralizer on the first 3 joints and one every third joint thereafter.                                      |
|            |  |

**ADDITIONAL INFORMATION**

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

**DRILLING ENGINEER:**

Nick Spence / Danny Showers / Chad Loesel

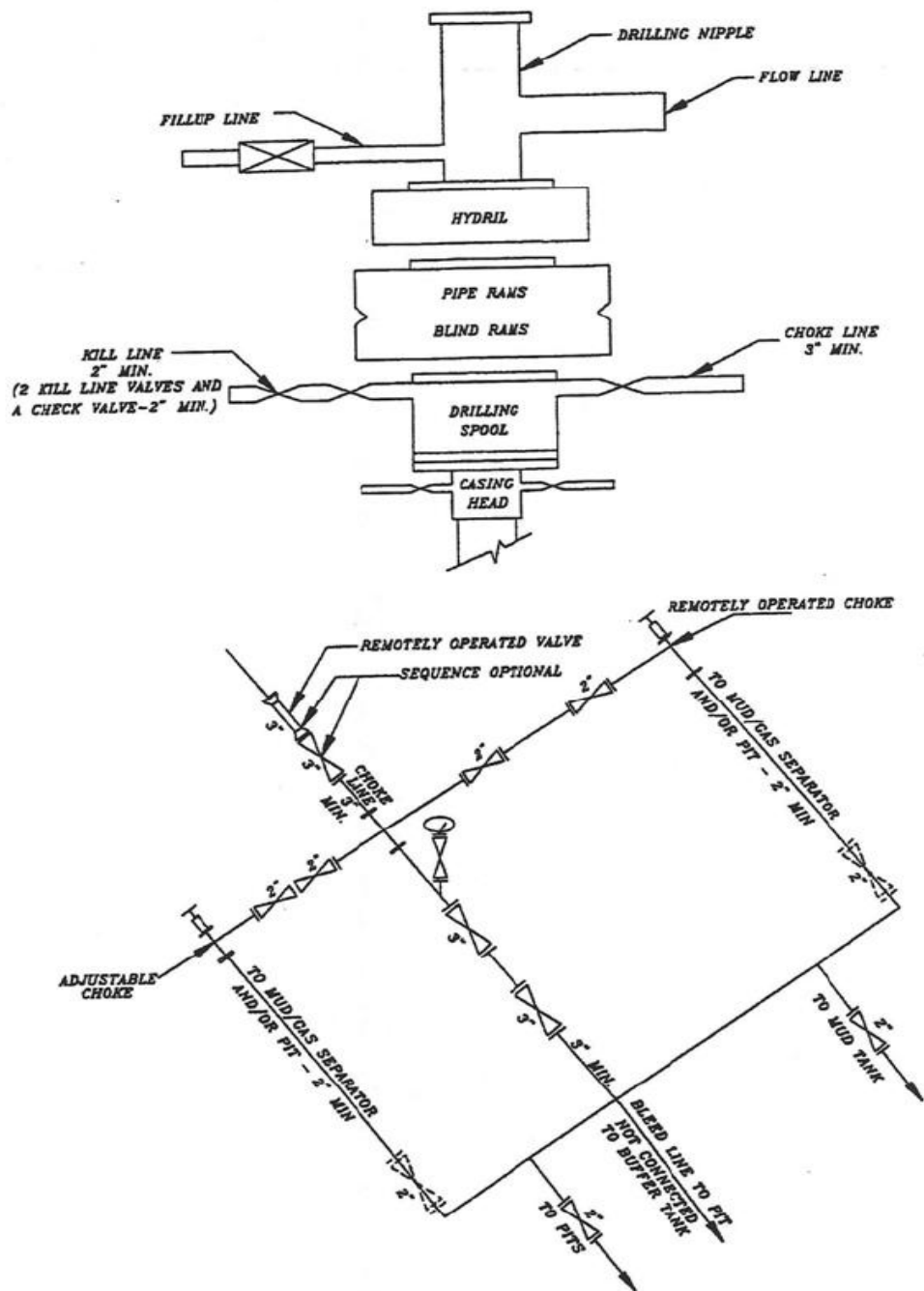
**DATE:****DRILLING SUPERINTENDENT:**

Kenny Gathings / Lovel Young

**DATE:**



**EXHIBIT A**  
**BONANZA 1023-511CS**



**SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK**

Requested Drilling Options:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

|   |  |  |
|---|--|--|
| <b>STATE OF UTAH</b><br>DEPARTMENT OF NATURAL RESOURCES<br>DIVISION OF OIL, GAS, AND MINING   |  | <b>FORM 9</b>  |
| <b>SUNDRY NOTICES AND REPORTS ON WELLS</b><br><br>Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.                            |  | <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b><br>UTU33433   |
| <b>1. TYPE OF WELL</b><br>Gas Well  |  | <b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>   |
| <b>2. NAME OF OPERATOR:</b><br>KERR-MCGEE OIL & GAS ONSHORE, L.P.   |  | <b>7. UNIT or CA AGREEMENT NAME:</b>   |
| <b>3. ADDRESS OF OPERATOR:</b><br>P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779   |  | <b>8. WELL NAME and NUMBER:</b><br>BONANZA 1023-511CS  |
| <b>4. LOCATION OF WELL</b><br><b>FOOTAGES AT SURFACE:</b><br>1634 FSL 1030 FEL<br><b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b><br>Qtr/Qtr: NESE Section: 05 Township: 10.0S Range: 23.0E Meridian: S   |  | <b>9. API NUMBER:</b><br>43047520600000  |
| <b>PHONE NUMBER:</b><br>720 929-6511  |  | <b>9. FIELD and POOL or WILDCAT:</b><br>NATURAL BUTTES   |
| <b>COUNTY:</b><br>UTAH  |  | <b>STATE:</b><br>UTAH  |
| 11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA   |  |  |
| <b>TYPE OF SUBMISSION</b>   | <b>TYPE OF ACTION</b>  |  |
| <input type="checkbox"/> NOTICE OF INTENT<br>Approximate date work will start:<br><br><input type="checkbox"/> SUBSEQUENT REPORT<br>Date of Work Completion:<br><br><input type="checkbox"/> SPUD REPORT<br>Date of Spud:<br><br><input checked="" type="checkbox"/> DRILLING REPORT<br>Report Date:<br>5/29/2012             | <div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE<br/><br/> <input type="checkbox"/> CHANGE TO PREVIOUS PLANS<br/><br/> <input type="checkbox"/> CHANGE WELL STATUS<br/><br/> <input type="checkbox"/> DEEPEN<br/><br/> <input type="checkbox"/> OPERATOR CHANGE<br/><br/> <input type="checkbox"/> PRODUCTION START OR RESUME<br/><br/> <input type="checkbox"/> REPERFORATE CURRENT FORMATION<br/><br/> <input type="checkbox"/> TUBING REPAIR<br/><br/> <input type="checkbox"/> WATER SHUTOFF<br/><br/> <input type="checkbox"/> WILDCAT WELL DETERMINATION         </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING<br/><br/> <input type="checkbox"/> CHANGE TUBING<br/><br/> <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS<br/><br/> <input type="checkbox"/> FRACTURE TREAT<br/><br/> <input type="checkbox"/> PLUG AND ABANDON<br/><br/> <input type="checkbox"/> RECLAMATION OF WELL SITE<br/><br/> <input type="checkbox"/> SIDETRACK TO REPAIR WELL<br/><br/> <input type="checkbox"/> VENT OR FLARE<br/><br/> <input type="checkbox"/> SI TA STATUS EXTENSION<br/><br/> <input type="checkbox"/> OTHER         </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR<br/><br/> <input type="checkbox"/> CHANGE WELL NAME<br/><br/> <input type="checkbox"/> CONVERT WELL TYPE<br/><br/> <input type="checkbox"/> NEW CONSTRUCTION<br/><br/> <input type="checkbox"/> PLUG BACK<br/><br/> <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION<br/><br/> <input type="checkbox"/> TEMPORARY ABANDON<br/><br/> <input type="checkbox"/> WATER DISPOSAL<br/><br/> <input type="checkbox"/> APD EXTENSION<br/><br/>         OTHER: <input style="width: 100px;" type="text"/> </div> </div> |  |
| 12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.<br><br>MIRU AIR RIG ON 5/27/2012. DRILLED SURFACE HOLE TO 2455'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT. |  |  |
|   |  | <b>Accepted by the<br/>         Utah Division of<br/>         Oil, Gas and Mining<br/>         FOR RECORD ONLY<br/>         May 30, 2012</b> |
| <b>NAME (PLEASE PRINT)</b><br>Cara Mahler   |  | <b>PHONE NUMBER</b><br>720 929-6029  |
| <b>SIGNATURE</b><br>N/A   |  | <b>TITLE</b><br>Regulatory Analyst I   |
|   |  | <b>DATE</b><br>5/30/2012   |

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 6

**ENTITY ACTION FORM**

Operator: KERR MCGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995  
Address: 1368 SOUTH 1200 EAST  
city VERNAL  
state UT zip 84078 Phone Number: (435) 781-7024

**Well 1**

| API Number  | Well Name             |                   | QQ        | Sec | Twp                              | Rng | County |
|---|-----------------------|-------------------|-----------|-----|----------------------------------|-----|--------|
| 4304752061  | BONANZA 1023-514BS    |                   | NESE      | 5   | 10S                              | 23E | UINTAH |
| Action Code   | Current Entity Number | New Entity Number | Spud Date |     | Entity Assignment Effective Date |     |        |
| B   | 99999                 | 18519             | 5/21/2012 |     | 5/30/2012                        |     |        |
| <b>Comments:</b> MIRU TRIPPLE A BUCKET RIG. <i>Ponderosa unit</i><br>SPUD WELL ON 05/21/2012 AT 0800 HRS. <i>wsmvd</i><br><i>BHL: ne se</i> |                       |                   |           |     |                                  |     |        |

**Well 2**

| API Number  | Well Name             |                   | QQ        | Sec | Twp                              | Rng | County |
|---|-----------------------|-------------------|-----------|-----|----------------------------------|-----|--------|
| 4304752060  | BONANZA 1023-511CS    |                   | NESE      | 5   | 10S                              | 23E | UINTAH |
| Action Code   | Current Entity Number | New Entity Number | Spud Date |     | Entity Assignment Effective Date |     |        |
| B   | 99999                 | 18519             | 5/21/2012 |     | 5/30/2012                        |     |        |
| <b>Comments:</b> MIRU TRIPPLE A BUCKET RIG. <i>Ponderosa unit</i><br>SPUD WELL ON 05/21/2012 AT 1100 HRS. <i>wsmvd</i><br><i>BHL: ne se</i> |                       |                   |           |     |                                  |     |        |

**Well 3**

| API Number  | Well Name             |                   | QQ        | Sec | Twp                              | Rng | County |
|---|-----------------------|-------------------|-----------|-----|----------------------------------|-----|--------|
| 4304752059  | BONANZA 1023-511BS    |                   | NESE      | 5   | 10S                              | 23E | UINTAH |
| Action Code   | Current Entity Number | New Entity Number | Spud Date |     | Entity Assignment Effective Date |     |        |
| B   | 99999                 | 18519             | 5/21/2012 |     | 5/30/2012                        |     |        |
| <b>Comments:</b> MIRU TRIPPLE A BUCKET RIG. <i>Ponderosa unit</i><br>SPUD WELL ON 05/21/2012 AT 1300 HRS. <i>wsmvd</i><br><i>BHL: ne se</i> |                       |                   |           |     |                                  |     |        |

**ACTION CODES:**

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

SHEILA WOPSOCK

Name (Please Print)

Signature

REGULATORY ANALYST

Title

5/24/2012

Date

**MAY 29 2012**

Div. of Oil, Gas & Mining

|  |  |  |
|--|--|--|
| <b>STATE OF UTAH</b><br>DEPARTMENT OF NATURAL RESOURCES<br>DIVISION OF OIL, GAS, AND MINING  |  | <b>FORM 9</b>  |
| <b>SUNDRY NOTICES AND REPORTS ON WELLS</b><br><br>Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.   |  | <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b><br>UTU33433 |
| <b>1. TYPE OF WELL</b><br>Gas Well   |  | <b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>               |
| <b>2. NAME OF OPERATOR:</b><br>KERR-MCGEE OIL & GAS ONSHORE, L.P.  |  | <b>7. UNIT or CA AGREEMENT NAME:</b><br>PONDEROSA          |
| <b>3. ADDRESS OF OPERATOR:</b><br>P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779  |  | <b>8. WELL NAME and NUMBER:</b><br>BONANZA 1023-511CS      |
| <b>4. LOCATION OF WELL</b><br><b>FOOTAGES AT SURFACE:</b><br>1634 FSL 1030 FEL<br><b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b><br>Qtr/Qtr: NESE Section: 05 Township: 10.0S Range: 23.0E Meridian: S  |  | <b>9. API NUMBER:</b><br>43047520600000                    |
| <b>PHONE NUMBER:</b><br>720 929-6511   |  | <b>9. FIELD and POOL or WILDCAT:</b><br>NATURAL BUTTES     |
| <b>COUNTY:</b><br>UINTAH   |  | <b>STATE:</b><br>UTAH                                      |
| 11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA  |  |  |
| <b>TYPE OF SUBMISSION</b>  | <b>TYPE OF ACTION</b>  |  |
| <input type="checkbox"/> NOTICE OF INTENT<br>Approximate date work will start:   | <input type="checkbox"/> ACIDIZE   |  |
| <input type="checkbox"/> SUBSEQUENT REPORT<br>Date of Work Completion:   | <input type="checkbox"/> ALTER CASING                                      |  |
| <input type="checkbox"/> SPUD REPORT<br>Date of Spud:  | <input type="checkbox"/> CASING REPAIR                                     |  |
| <input checked="" type="checkbox"/> DRILLING REPORT<br>Report Date:<br>6/16/2012   | <input type="checkbox"/> CHANGE TO PREVIOUS PLANS                          |  |
|  | <input type="checkbox"/> CHANGE WELL STATUS                                |  |
|  | <input type="checkbox"/> CHANGE WELL NAME                                  |  |
|  | <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS                    |  |
|  | <input type="checkbox"/> CONVERT WELL TYPE                                 |  |
|  | <input type="checkbox"/> DEEPEN  |  |
|  | <input type="checkbox"/> FRACTURE TREAT                                    |  |
|  | <input type="checkbox"/> NEW CONSTRUCTION                                  |  |
|  | <input type="checkbox"/> OPERATOR CHANGE                                   |  |
|  | <input type="checkbox"/> PLUG AND ABANDON                                  |  |
|  | <input type="checkbox"/> PLUG BACK   |  |
|  | <input type="checkbox"/> PRODUCTION START OR RESUME                        |  |
|  | <input type="checkbox"/> RECLAMATION OF WELL SITE                          |  |
|  | <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION                    |  |
|  | <input type="checkbox"/> REPERFORATE CURRENT FORMATION                     |  |
|  | <input type="checkbox"/> SIDETRACK TO REPAIR WELL                          |  |
|  | <input type="checkbox"/> TEMPORARY ABANDON                                 |  |
|  | <input type="checkbox"/> TUBING REPAIR                                     |  |
|  | <input type="checkbox"/> VENT OR FLARE                                     |  |
|  | <input type="checkbox"/> WATER DISPOSAL                                    |  |
|  | <input type="checkbox"/> WATER SHUTOFF                                     |  |
|  | <input type="checkbox"/> SI TA STATUS EXTENSION                            |  |
|  | <input type="checkbox"/> WILDCAT WELL DETERMINATION                        |  |
|  | <input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/> |  |
| 12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.<br>MIRU ROTARY RIG. FINISHED DRILLING FROM 2455' TO 8486' ON 6/14/2012. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED XTREME 12 RIG ON 6/15/2012 @ 11:30 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES. |  |  |
| Accepted by the<br>Utah Division of<br>Oil, Gas and Mining<br><b>FOR RECORD ONLY</b><br>June 18, 2012  |  |  |
| <b>NAME (PLEASE PRINT)</b><br>Cara Mahler  | <b>PHONE NUMBER</b><br>720 929-6029  | <b>TITLE</b><br>Regulatory Analyst I                       |
| <b>SIGNATURE</b><br>N/A  | <b>DATE</b><br>6/18/2012   |  |



State of Utah - Notification Form

Operator KERR MCGEE OIL AND GAS Rig Name/# XTREME 12  
Submitted By DALTON KING Phone Number 435- 828-0985  
Well Name/Number BONANZA 1023-5I1CS  
Qtr/Qtr NE/SE Section 5 Township 10S Range 23E  
Lease Serial Number UTU-33433  
API Number 43-047-52060

Casing – Time casing run starts, not cementing times.

- ☒ Production Casing  
☐ Other

Date/Time 6/14/2012 15:00 AM ☐ PM ☒

BOPE

- ☐ Initial BOPE test at surface casing point  
☐ Other

Date/Time \_\_\_\_\_ AM ☐ PM ☐

Rig Move

Location To: BONANZA 1023-5I1BS

RECEIVED

JUN 13 2012

DIV. OF OIL, GAS & MINING

Date/Time 6/15/2012 06:00 AM ☒ PM ☐

Remarks TIME IS ESTIMATED

|  |   |  |
|--|---|--|
| <b>STATE OF UTAH</b><br>DEPARTMENT OF NATURAL RESOURCES<br>DIVISION OF OIL, GAS, AND MINING  |   | <b>FORM 9</b>  |
| <b>SUNDRY NOTICES AND REPORTS ON WELLS</b><br><br>Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals. |   | <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b><br>UTU33433 |
| <b>1. TYPE OF WELL</b><br>Gas Well   |   | <b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>               |
| <b>2. NAME OF OPERATOR:</b><br>KERR-MCGEE OIL & GAS ONSHORE, L.P.  |   | <b>7. UNIT or CA AGREEMENT NAME:</b><br>PONDEROSA          |
| <b>3. ADDRESS OF OPERATOR:</b><br>P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779  |   | <b>8. WELL NAME and NUMBER:</b><br>BONANZA 1023-511CS      |
| <b>4. LOCATION OF WELL</b><br><b>FOOTAGES AT SURFACE:</b><br>1634 FSL 1030 FEL<br><b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b><br>Qtr/Qtr: NESE Section: 05 Township: 10.0S Range: 23.0E Meridian: S  |   | <b>9. API NUMBER:</b><br>43047520600000                    |
| <b>PHONE NUMBER:</b><br>720 929-6511   |   | <b>9. FIELD and POOL or WILDCAT:</b><br>NATURAL BUTTES     |
| <b>COUNTY:</b><br>UINTAH   |   | <b>STATE:</b><br>UTAH                                      |
| 11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA  |   |  |
| <b>TYPE OF SUBMISSION</b>  | <b>TYPE OF ACTION</b>                                   |  |
| <input type="checkbox"/> NOTICE OF INTENT<br>Approximate date work will start:   | <input type="checkbox"/> ACIDIZE                        |  |
| <input type="checkbox"/> SUBSEQUENT REPORT<br>Date of Work Completion:   | <input type="checkbox"/> ALTER CASING                   |  |
| <input type="checkbox"/> SPUD REPORT<br>Date of Spud:  | <input type="checkbox"/> CASING REPAIR                  |  |
| <input checked="" type="checkbox"/> DRILLING REPORT<br>Report Date:<br>8/2/2012  | <input type="checkbox"/> CHANGE TO PREVIOUS PLANS       |  |
|  | <input type="checkbox"/> CHANGE TUBING                  |  |
|  | <input type="checkbox"/> CHANGE WELL STATUS             |  |
|  | <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS |  |
|  | <input type="checkbox"/> CONVERT WELL TYPE              |  |
|  | <input type="checkbox"/> DEEPEN                         |  |
|  | <input type="checkbox"/> FRACTURE TREAT                 |  |
|  | <input type="checkbox"/> NEW CONSTRUCTION               |  |
|  | <input type="checkbox"/> OPERATOR CHANGE                |  |
|  | <input type="checkbox"/> PLUG AND ABANDON               |  |
|  | <input type="checkbox"/> PLUG BACK                      |  |
|  | <input type="checkbox"/> PRODUCTION START OR RESUME     |  |
|  | <input type="checkbox"/> RECLAMATION OF WELL SITE       |  |
|  | <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION |  |
|  | <input type="checkbox"/> REPERFORATE CURRENT FORMATION  |  |
|  | <input type="checkbox"/> SIDETRACK TO REPAIR WELL       |  |
|  | <input type="checkbox"/> TEMPORARY ABANDON              |  |
|  | <input type="checkbox"/> TUBING REPAIR                  |  |
|  | <input type="checkbox"/> VENT OR FLARE                  |  |
|  | <input type="checkbox"/> WATER DISPOSAL                 |  |
|  | <input type="checkbox"/> WATER SHUTOFF                  |  |
|  | <input type="checkbox"/> SI TA STATUS EXTENSION         |  |
|  | <input type="checkbox"/> WILDCAT WELL DETERMINATION     |  |
|  | <input type="checkbox"/> OTHER                          |  |
|  | OTHER: <input style="width: 100px;" type="text"/>       |  |
| 12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.<br>No activity for the month of July 2012. Well TD at 8,486'.   |   |  |
| Accepted by the<br>Utah Division of<br>Oil, Gas and Mining<br><b>FOR RECORD ONLY</b><br>August 07, 2012  |   |  |
| <b>NAME (PLEASE PRINT)</b><br>Cara Mahler  | <b>PHONE NUMBER</b><br>720 929-6029                     | <b>TITLE</b><br>Regulatory Analyst I                       |
| <b>SIGNATURE</b><br>N/A  | <b>DATE</b><br>8/2/2012                                 |  |

|  |  |  |
|--|--|--|
| <b>STATE OF UTAH</b><br>DEPARTMENT OF NATURAL RESOURCES<br>DIVISION OF OIL, GAS, AND MINING  |  | <b>FORM 9</b>  |
| <b>SUNDRY NOTICES AND REPORTS ON WELLS</b><br><br>Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals. |  | <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b><br>UTU33433 |
| <b>1. TYPE OF WELL</b><br>Gas Well   |  | <b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>               |
| <b>2. NAME OF OPERATOR:</b><br>KERR-MCGEE OIL & GAS ONSHORE, L.P.  |  | <b>7. UNIT or CA AGREEMENT NAME:</b><br>PONDEROSA          |
| <b>3. ADDRESS OF OPERATOR:</b><br>P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779  |  | <b>8. WELL NAME and NUMBER:</b><br>BONANZA 1023-511CS      |
| <b>4. LOCATION OF WELL</b><br><b>FOOTAGES AT SURFACE:</b><br>1634 FSL 1030 FEL<br><b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b><br>Qtr/Qtr: NESE Section: 05 Township: 10.0S Range: 23.0E Meridian: S  |  | <b>9. API NUMBER:</b><br>43047520600000                    |
| <b>5. FIELD and POOL or WILDCAT:</b><br>NATURAL BUTTES   |  | <b>9. FIELD and POOL or WILDCAT:</b><br>NATURAL BUTTES     |
| <b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>   |  | <b>COUNTY:</b><br>UINTAH                                   |
| <b>STATE:</b><br>UTAH  |  |  |
| <b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>   |  |  |
| <b>TYPE OF SUBMISSION</b>  | <b>TYPE OF ACTION</b>  |  |
| <input type="checkbox"/> NOTICE OF INTENT<br>Approximate date work will start:   | <input type="checkbox"/> ACIDIZE   |  |
| <input type="checkbox"/> SUBSEQUENT REPORT<br>Date of Work Completion:   | <input type="checkbox"/> ALTER CASING                                      |  |
| <input type="checkbox"/> SPUD REPORT<br>Date of Spud:  | <input type="checkbox"/> CASING REPAIR                                     |  |
| <input checked="" type="checkbox"/> DRILLING REPORT<br>Report Date:<br>9/4/2012  | <input type="checkbox"/> CHANGE TO PREVIOUS PLANS                          |  |
|  | <input type="checkbox"/> CHANGE TUBING                                     |  |
|  | <input type="checkbox"/> CHANGE WELL STATUS                                |  |
|  | <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS                    |  |
|  | <input type="checkbox"/> CONVERT WELL TYPE                                 |  |
|  | <input type="checkbox"/> DEEPEN  |  |
|  | <input type="checkbox"/> FRACTURE TREAT                                    |  |
|  | <input type="checkbox"/> NEW CONSTRUCTION                                  |  |
|  | <input type="checkbox"/> OPERATOR CHANGE                                   |  |
|  | <input type="checkbox"/> PLUG AND ABANDON                                  |  |
|  | <input type="checkbox"/> PLUG BACK   |  |
|  | <input type="checkbox"/> PRODUCTION START OR RESUME                        |  |
|  | <input type="checkbox"/> RECLAMATION OF WELL SITE                          |  |
|  | <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION                    |  |
|  | <input type="checkbox"/> REPERFORATE CURRENT FORMATION                     |  |
|  | <input type="checkbox"/> SIDETRACK TO REPAIR WELL                          |  |
|  | <input type="checkbox"/> TEMPORARY ABANDON                                 |  |
|  | <input type="checkbox"/> TUBING REPAIR                                     |  |
|  | <input type="checkbox"/> VENT OR FLARE                                     |  |
|  | <input type="checkbox"/> WATER DISPOSAL                                    |  |
|  | <input type="checkbox"/> WATER SHUTOFF                                     |  |
|  | <input type="checkbox"/> SI TA STATUS EXTENSION                            |  |
|  | <input type="checkbox"/> WILDCAT WELL DETERMINATION                        |  |
|  | <input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/> |  |
| <b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b><br>No Activity for the month of August 2012. Well TD at 8,486  |  |  |
| Accepted by the<br>Utah Division of<br>Oil, Gas and Mining<br><b>FOR RECORD ONLY</b><br>September 07, 2012   |  |  |
| <b>NAME (PLEASE PRINT)</b><br>Lindsey Frazier  | <b>PHONE NUMBER</b><br>720 929-6857  | <b>TITLE</b><br>Regulatory Analyst II                      |
| <b>SIGNATURE</b><br>N/A  | <b>DATE</b><br>9/4/2012  |  |

|   |  |   |
|---|--|---|
| <b>STATE OF UTAH</b><br>DEPARTMENT OF NATURAL RESOURCES<br>DIVISION OF OIL, GAS, AND MINING   |  | <b>FORM 9</b>   |
| <b>SUNDRY NOTICES AND REPORTS ON WELLS</b><br><br>Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.                |  | <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b><br>UTU33433  |
| <b>1. TYPE OF WELL</b><br>Gas Well  |  | <b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  |
| <b>2. NAME OF OPERATOR:</b><br>KERR-MCGEE OIL & GAS ONSHORE, L.P.   |  | <b>7. UNIT or CA AGREEMENT NAME:</b><br>PONDEROSA   |
| <b>3. ADDRESS OF OPERATOR:</b><br>P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779   |  | <b>8. WELL NAME and NUMBER:</b><br>BONANZA 1023-511CS   |
| <b>4. LOCATION OF WELL</b><br><b>FOOTAGES AT SURFACE:</b><br>1634 FSL 1030 FEL<br><b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b><br>Qtr/Qtr: NESE Section: 05 Township: 10.0S Range: 23.0E Meridian: S   |  | <b>9. API NUMBER:</b><br>43047520600000   |
| <b>5. FIELD and POOL or WILDCAT:</b><br>NATURAL BUTTES  |  | <b>9. FIELD and POOL or WILDCAT:</b><br>NATURAL BUTTES  |
| <b>COUNTY:</b><br>UINTAH  |  | <b>STATE:</b><br>UTAH   |
| 11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA   |  |   |
| <b>TYPE OF SUBMISSION</b>   | <b>TYPE OF ACTION</b>  |   |
| <input type="checkbox"/> NOTICE OF INTENT<br>Approximate date work will start:<br><br><input type="checkbox"/> SUBSEQUENT REPORT<br>Date of Work Completion:<br><br><input type="checkbox"/> SPUD REPORT<br>Date of Spud:<br><br><input checked="" type="checkbox"/> DRILLING REPORT<br>Report Date:<br>9/21/2012 | <div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE<br/><br/> <input type="checkbox"/> CHANGE TO PREVIOUS PLANS<br/><br/> <input type="checkbox"/> CHANGE WELL STATUS<br/><br/> <input type="checkbox"/> DEEPEN<br/><br/> <input type="checkbox"/> OPERATOR CHANGE<br/><br/> <input checked="" type="checkbox"/> PRODUCTION START OR RESUME<br/><br/> <input type="checkbox"/> REPERFORATE CURRENT FORMATION<br/><br/> <input type="checkbox"/> TUBING REPAIR<br/><br/> <input type="checkbox"/> WATER SHUTOFF<br/><br/> <input type="checkbox"/> WILDCAT WELL DETERMINATION         </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING<br/><br/> <input type="checkbox"/> CHANGE TUBING<br/><br/> <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS<br/><br/> <input type="checkbox"/> FRACTURE TREAT<br/><br/> <input type="checkbox"/> PLUG AND ABANDON<br/><br/> <input type="checkbox"/> RECLAMATION OF WELL SITE<br/><br/> <input type="checkbox"/> SIDETRACK TO REPAIR WELL<br/><br/> <input type="checkbox"/> VENT OR FLARE<br/><br/> <input type="checkbox"/> SI TA STATUS EXTENSION<br/><br/> <input type="checkbox"/> OTHER         </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR<br/><br/> <input type="checkbox"/> CHANGE WELL NAME<br/><br/> <input type="checkbox"/> CONVERT WELL TYPE<br/><br/> <input type="checkbox"/> NEW CONSTRUCTION<br/><br/> <input type="checkbox"/> PLUG BACK<br/><br/> <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION<br/><br/> <input type="checkbox"/> TEMPORARY ABANDON<br/><br/> <input type="checkbox"/> WATER DISPOSAL<br/><br/> <input type="checkbox"/> APD EXTENSION<br/><br/>         OTHER: <input style="width: 100%;" type="text"/> </div> </div> |   |
| 12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.<br>THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 09/21/2012. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.  |  |   |
| <b>NAME (PLEASE PRINT)</b><br>Lindsey Frazier   |  | <b>PHONE NUMBER</b><br>720 929-6857   |
| <b>SIGNATURE</b><br>N/A   |  | <b>TITLE</b><br>Regulatory Analyst II   |
| <b>DATE</b><br>9/24/2012  |  | <b>Accepted by the</b><br><b>Utah Division of</b><br><b>Oil, Gas and Mining</b><br><b>FOR RECORD ONLY</b><br>September 25, 2012 |

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.  
UTU33433

- 1a. Type of Well ☐ Oil Well ☒ Gas Well ☐ Dry ☐ Other  
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.  
Other \_\_\_\_\_

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.  
UTU88209A2. Name of Operator  
KERR MCGEE OIL & GAS ONSHORE  
Contact: JAIME L. SCHARNOWSKE  
Email: JAIME.SCHARNOWSKE@ANADARKO.COM8. Lease Name and Well No.  
BONANZA 1023-511CS3. Address  
PO BOX 173779  
DENVER, CO 802173a. Phone No. (include area code)  
Ph: 720-929-63049. API Well No.  
43-047-52060

4. Location of Well (Report location clearly and in accordance with Federal requirements)\*

At surface NESE 1634FSL 1030FEL 39.975206 N Lat, 109.345002 W Lon

At top prod interval reported below NESE 2139FSL 463FEL

At total depth NESE 2139FSL 455FEL BHL by HSM

10. Field and Pool, or Exploratory  
NATURAL BUTTES11. Sec., T., R., M., or Block and Survey  
or Area Sec 5 T10S R23E Mer SLB12. County or Parish  
UINTAH13. State  
UT14. Date Spudded  
05/21/201215. Date T.D. Reached  
06/14/201216. Date Completed  
☐ D & A ☒ Ready to Prod.  
09/21/201217. Elevations (DF, KB, RT, GL)\*  
5297 GL18. Total Depth: MD 8486  
TVD 838619. Plug Back T.D.: MD 8420  
TVD 832020. Depth Bridge Plug Set: MD  
TVD21. Type Electric & Other Mechanical Logs Run (Submit copy of each)  
CBL/GR/CCL/TEMP22. Was well cored? ☒ No ☐ Yes (Submit analysis)  
Was DST run? ☒ No ☐ Yes (Submit analysis)  
Directional Survey? ☐ No ☒ Yes (Submit analysis)

## 23. Casing and Liner Record (Report all strings set in well)

| Hole Size | Size/Grade  | Wt. (#/ft.) | Top (MD) | Bottom (MD) | Stage Cementer Depth | No. of Sk. & Type of Cement | Slurry Vol. (BBL) | Cement Top* | Amount Pulled |
|-----------|-------------|-------------|----------|-------------|----------------------|-----------------------------|-------------------|-------------|---------------|
| 20.000    | 14.000 STL  | 36.7        | 0        | 40          |                      | 28                          |                   |             |               |
| 11.000    | 8.625 IJ-55 | 28.0        | 0        | 2435        |                      | 575                         |                   | 0           |               |
| 7.875     | 4.500 I-80  | 11.6        | 20       | 4497        |                      | 1320                        |                   | 1460        |               |
| 7.875     | 4.500 P-110 | 11.6        | 4497     | 5046        |                      |                             |                   |             |               |
| 7.875     | 4.500 I-80  | 11.6        | 5046     | 8467        |                      |                             |                   |             |               |

## 24. Tubing Record

| Size  | Depth Set (MD) | Packer Depth (MD) | Size | Depth Set (MD) | Packer Depth (MD) | Size | Depth Set (MD) | Packer Depth (MD) |
|-------|----------------|-------------------|------|----------------|-------------------|------|----------------|-------------------|
| 2.375 | 7840           |                   |      |                |                   |      |                |                   |

## 25. Producing Intervals

## 26. Perforation Record

| Formation    | Top  | Bottom | Perforated Interval | Size  | No. Holes | Perf. Status |
|--------------|------|--------|---------------------|-------|-----------|--------------|
| A) WASATCH   | 5844 | 6159   | 5844 TO 6159        | 0.360 | 48        | OPEN         |
| B) MESAVERDE | 6894 | 8368   | 6894 TO 8368        | 0.360 | 168       | OPEN         |
| C)           |      |        |                     |       |           |              |
| D)           |      |        |                     |       |           |              |

## 27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

| Depth Interval | Amount and Type of Material                                |
|----------------|--|
| 5844 TO 8368   | PUMP 10,940 BBLs SLICK H2O & 222,400 LBS 30/50 OTTAWA SAND |

## 28. Production - Interval A

| Date First Produced | Test Date            | Hours Tested   | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---------------------|----------------------|----------------|-----------------|---------|---------|-----------|-----------------------|-------------|-------------------|
| 09/21/2012          | 09/24/2012           | 24             | →               | 0.0     | 1591.0  | 0.0       |                       |             | FLows FROM WELL   |
| Choke Size          | Tbg. Press. Flwg. SI | Csg. Press. SI | 24 Hr. Rate     | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio         | Well Status |                   |
| 20/64               | 1293                 | 1987.0         | →               | 0       | 1591    | 0         |                       | PGW         |                   |

## 28a. Production - Interval B

| Date First Produced | Test Date            | Hours Tested   | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---------------------|----------------------|----------------|-----------------|---------|---------|-----------|-----------------------|-------------|-------------------|
|                     |                      |                | →               |         |         |           |                       |             |                   |
| Choke Size          | Tbg. Press. Flwg. SI | Csg. Press. SI | 24 Hr. Rate     | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio         | Well Status |                   |
|                     |                      |                | →               |         |         |           |                       |             |                   |

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #155097 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

RECEIVED

OCT 24 2012

DIV. OF OIL, GAS &amp; MINING



## 28b. Production - Interval C

| Date First Produced | Test Date            | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---------------------|----------------------|--------------|-----------------|---------|---------|-----------|-----------------------|-------------|-------------------|
|                     |                      |              | →               |         |         |           |                       |             |                   |
| Choke Size          | Tbg. Press. Flwg. SI | Csg. Press.  | 24 Hr. Rate     | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio         | Well Status |                   |
|                     |                      |              | →               |         |         |           |                       |             |                   |

## 28c. Production - Interval D

| Date First Produced | Test Date            | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---------------------|----------------------|--------------|-----------------|---------|---------|-----------|-----------------------|-------------|-------------------|
|                     |                      |              | →               |         |         |           |                       |             |                   |
| Choke Size          | Tbg. Press. Flwg. SI | Csg. Press.  | 24 Hr. Rate     | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio         | Well Status |                   |
|                     |                      |              | →               |         |         |           |                       |             |                   |

29. Disposition of Gas(Sold, used for fuel, vented, etc.)  
SOLD

## 30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

## 31. Formation (Log) Markers

| Formation | Top | Bottom | Descriptions, Contents, etc. | Name   | Top Meas. Depth                      |
|-----------|-----|--------|------------------------------|--|--------------------------------------|
|           |     |        |                              | GREEN RIVER<br>BIRD'S NEST<br>MAHOGANY<br>WASATCH<br>MESAVERDE | 1199<br>1394<br>1967<br>4301<br>6194 |

## 32. Additional remarks (include plugging procedure):

The first 210' of the surface hole was drilled with a 12 ?? bit. The remainder of surface hole was drilled with an 11? bit. BTC csg was run from surface to 4497 ft; DQX csg was run from 4497 ft to 5046 ft. and LTC csg was run from 5,046 ft to 8,467 ft. Attached is the chronological well history, perforation report & final survey.

## 33. Circle enclosed attachments:

- |   |                    |               |                       |
|---|--------------------|---------------|-----------------------|
| 1. Electrical/Mechanical Logs (1 full set req'd.)     | 2. Geologic Report | 3. DST Report | 4. Directional Survey |
| 5. Sundry Notice for plugging and cement verification | 6. Core Analysis   | 7. Other:     |                       |

## 34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #155097 Verified by the BLM Well Information System.  
For KERR MCGEE OIL & GAS ONSHORE,L, sent to the Vernal

Name (please print) JAIME L. SCHARNOWSKETitle REGULATORY ANALYSTSignature (Electronic Submission)Date 10/16/2012

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**\*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\***

**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-511CS BLUE

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: BONANZA 1023-51 PAD

Rig Name No: PROPETRO 12/12, XTC 12/12

Event: DRILLING

Start Date: 5/16/2012

End Date: 6/15/2012

Active Datum: RKB @5,312.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/23/E/5/0/0/26/PM/S/1634/E/0/1030/0/0

| Date      | Time<br>Start-End | Duration<br>(hr) | Phase  | Code | Sub<br>Code | P/U | MD From<br>(usft) | Operation   |
|-----------|-------------------|------------------|--------|------|-------------|-----|-------------------|---|
| 5/27/2012 | 15:30 - 19:00     | 3.50             | DRLSUR | 01   | C           | P   |                   | SKIKD RIG TO WELL 2/5 BON 1023-511CS  |
|           | 19:00 - 20:30     | 1.50             | DRLSUR | 02   | C           | P   |                   | SPUD 05/27/2012 19:00 hrs.<br>DRILL 12.25" HOLE 44'-210' (166', 110'/PER HOUR).<br>12.25 in. BIT ON 48 th RUN.<br>WEIGHT ON BIT 5-15 K.<br>STROKES PER MINUTE 120 GALLONS PER MINUTE<br>491. PRESSURE ON/OFF (BOTTOM) 800/600.<br>ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138.<br>UP/DOWN/ ROTATE 20/20/20 K. DRAG 0 K.                                      |
|           | 20:30 - 22:30     | 2.00             | DRLSUR | 06   | A           | P   |                   | CIRCULATE CLOSED LOOP SYSTEM WITH 8.5#<br>WATER. DRILL DOWN TO 210' WITH 6" DRILL<br>COLLARS.<br>CIRC 15 MINUTES AND, TRIP OUT TO CHANGE<br>ASSEMBLY.<br>PRE JOB SAFETY MEETING,<br>LAY DOWN 6" DRILL COLLARS, BREAK 12 1/4" BIT.<br>MAKE UP Q506F 11" BIT (3 RD RUN) (SN 7029640)<br>PICK UP 8" DIRECTIONAL ASSEMBLY. INSTALL EM<br>TOOL.<br>TRIP IN HOLE. |
|           | 22:30 - 0:00      | 1.50             | DRLSUR | 02   | C           | P   |                   | DRILL 11" SURFACE HOLE 210'- 420', (210',<br>140'/PER HOUR).<br>WEIGHT ON BIT 15-25 K.<br>STROKES PER MINUTE 120 GALLONS PER MINUTE<br>491.<br>PRESSURE ON/OFF (BOTTOM) 1090/880.<br>ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138.<br>UP/DOWN/ ROTATE 59/43/50 K. DRAG 7 K.   |
|           |                   |                  |        |      |             |     |                   | SLIDING 15'-20 PER 90'OF ROTATION GETTING 1.8<br>DEGREE BUILD RATES   |
|           |                   |                  |        |      |             |     |                   | CIRCULATE CLOSED LOOP SYSTEM WITH 8.6#<br>WATER.<br>RUNNING VOLUME OVER BOTH SHAKERS<br>200 API SCREENS ON SHAKERS<br>NO HOLE ISSUES.   |

**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-5I1CS BLUE

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: BONANZA 1023-5I PAD

Rig Name No: PROPETRO 12/12, XTC 12/12

Event: DRILLING

Start Date: 5/16/2012

End Date: 6/15/2012

Active Datum: RKB @5,312.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/23/E/5/0/0/26/PM/S/1634/E/0/1030/0/0

| Date      | Time<br>Start-End | Duration<br>(hr) | Phase  | Code | Sub<br>Code | P/U | MD From<br>(usft) | Operation   |
|-----------|-------------------|------------------|--------|------|-------------|-----|-------------------|---|
| 5/28/2012 | 0:00 - 19:00      | 19.00            | DRLSUR | 02   | C           | P   |                   | DRILL 11" SURFACE HOLE 420' - 2455' T.D., (2035', 107 ROP).<br>WEIGHT ON BIT 15-25 K.<br>STROKES PER MINUTE 120 GALLONS PER MINUTE 491.<br>PRESSURE ON/OFF(BOTTOM) 1090/880.<br>ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138.<br>UP/DOWN/ ROTATE 87/63/75 K. DRAG 12 K.<br>AIR ON AT 1200 AT 1550 CFM   |
|           |                   |                  |        |      |             |     |                   | SLIDING 15'-20 PER 90'OF ROTATION GETTING 1.8 DEGREE BUILD RATES LAST SURVEY 18.55 DEG 44.9 AZI<br>2.5' LOW 2.5' LEFT 501' SLIDING % 21%  |
|           |                   |                  |        |      |             |     |                   | CIRCULATE CLOSED LOOP SYSTEM WITH 8.6# WATER.<br>RUNNING VOLUME OVER BOTH SHAKERS<br>200 API SCREENS ON SHAKERS<br>NO HOLE ISSUES.  |
|           | 19:00 - 21:00     | 2.00             | DRLSUR | 05   | C           | P   |                   | CIRCULATE AND CONDITION MUD PRIOR TO LDDS   |
|           | 21:00 - 0:00      | 3.00             | DRLSUR | 06   | A           | P   |                   | TRIP OUT OF HOLE LAYING DOWN DRILL STRING.  |
| 5/29/2012 | 0:00 - 2:00       | 2.00             | DRLSUR | 06   | A           | P   |                   | FINISH TRIP OUT OF HOLE L/D MWD TOOL, ALL DIRECTIONAL TOOLS AND BHA BIT AND MUD MOTOR   |
|           | 2:00 - 6:00       | 4.00             | DRLSUR | 12   | C           | P   |                   | RIG UP AND RUN 55 JOINTS 8.625" J55 28# SURFACE CASING SHOE AT 2423' BAFFLE AT 2379' NO PROBLEMS GETTING CASING TO BOTTOM   |
|           | 6:00 - 9:30       | 3.50             | DRLSUR | 12   | E           | P   |                   | PRESSURE TEST LINES TO 2000 PSI. PUMP 135 BBLS OF WATER AHEAD. CATCH PSI. PUMP 20 BBLS OF 8.3# GEL WATER AHEAD. MIX AND PUMP (300 SX) 61.4 BBLS OF 15.8# 1.15 YD 5 GAL/SK PREMIUM CEMENT W/ 2% CALC. DROP PLUG ON FLY. DISPLACE W/ 143 BBLS OF H2O. NO CIRC THROUGH OUT. FINAL LIFT OF 210 PSI AT 4 BBL/MIN. BUMP PLUG WITH 500 PSI FOR 5 MIN. FLOAT HELD. MIX AND PUMP (150 SX) 30.7 BBLS OF SAME TAIL CEMENT W/ 4% CALC. DOWN BACKSIDE, NO CEMENT TO SURFACE. SHUT DOWN AND CLEAN TRUCK. WAIT 1.5 HOURS MIX AND PUMP (125 SX) 22.4 BBLS OF SAME TAIL CEMENT W/ 4% CALC. DOWN BACKSIDE NO CEMENT TO SURFACE. NO CEMENT TO SURFACE. SHUT DOWN AND CLEAN TRUCK. WILL TOP OUT ON NEXT JOB |
| 6/11/2012 | 6:30 - 7:30       | 1.00             | MIRU   | 01   | C           | P   |                   | PULL CAT WALK FORWARD. INSTALL SKID RAILS. PREPARE RIG FOR SKID AND SKID RIG FORWARD 10'. RESET CATWALK. ADD ELECTRICAL EXTENSION TO RIG. CENTER AND LEVEL RIG OVER HOLE.   |
|           | 7:30 - 8:30       | 1.00             | MIRU   | 14   | A           | P   |                   | NIPPLE UP BOPE. TIGHTEN CAMERON QUICK FLANGE. ADD L EXTENSION TO FLOW LINES. MOVE FLOW SENSOR FROM STRAIGHT FLOW LINE EXTENSION AND RIG UP ON L EXTENSION.  |

**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-5I1CS BLUE

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: BONANZA 1023-5I PAD

Rig Name No: PROPETRO 12/12, XTC 12/12

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UWI: NE/SE/0/10/S/23/E/5/0/0/26/PM/S/1634/E/0/1030/0/0

| Date | Time<br>Start-End | Duration<br>(hr) | Phase  | Code | Sub<br>Code | P/U | MD From<br>(usft) | Operation   |
|------|-------------------|------------------|--------|------|-------------|-----|-------------------|---|
|      | 8:30 - 14:00      | 5.50             | MIRU   | 15   | A           | P   |                   | HOLD SAFETY MEETING.<br>TEST TOP DRIVE VALVE, I-BOP VALVE, FLOOR VALVE, DART VALVE, PIPE AND BLIND RAMS, INSIDE AND OUTSIDE KILL LINE VALVES INSIDE OUTSIDE CHOKE LINE VALVE, HCR VALVE, CHOKE LINE, CHOKE MANIFOLD VALVES AND CHOKES TO 5000 PSI FOR 10 MINUTES AND 250 PSI FOR 5 MINUTES.<br>TEST ANNULAR TO 2500 PSI FOR 10 MIN AND 250 PSI FOR 5 MINUTES.<br>TESTING CASING TO 1500 PSI FOR 30 MINUTES.         |
|      | 14:00 - 16:00     | 2.00             | MIRU   | 02   |             |     |                   | INSTALL WEAR BUSHING.<br>P/U WEATHERFORD 1.5 BH .16 RPG MOTOR (SN 625-3946).<br>MADE UP SMITH MDI 616 BIT W/ 6-15'S (SN JF6818).<br>SCRIBED MOTOR. P/U DOUBLE PIN, NON MAG TOOL CARRIER AND EM SUB.<br>INSTALL EM TOOL. P/U MONEL AND CROSSOVER TO HWDP.<br>TRIP IN HOLE WITH HEAVY WEIGHT DRILL PIPE @ 950'  |
|      | 16:00 - 17:00     | 1.00             | MIRU   | 09   | A           | P   |                   | SLIP AND CUT 49' OF DRILL LINE.   |
|      | 17:00 - 18:30     | 1.50             | MIRU   | 06   | A           | P   |                   | INSTALL NEW ROTATING HEAD RUBBER. TRIP IN HOLE WITH DRILL PIPE. TAG CEMENT 2329'  |
|      | 18:30 - 19:30     | 1.00             | MIRU   | 07   | A           | P   |                   | SERVICE RIG. CHECK BRAKE ADJUSTMENT. CHECK EMERGENCY STOP BUTTONS. PERFORM PRESUPD INSPECTION. CHAIN UP FLOW LINE. INSTALL KILL HOSE. CHECK WHIP CHECKS ON VIBRATING HOSES.   |
|      | 19:30 - 20:00     | 0.50             | MAINT  | 08   | B           | Z   |                   | TROUBLE SHOOT PUMPS... PUMPS WOULD NOT ENGAGE. CHECK CONNECTIONS AND RESET PLC'S TO GET PUMPS TO WORK.  |
|      | 20:00 - 21:00     | 1.00             | DRLPRO | 02   | D           | P   |                   | SPUD 6/11/2012 20:00<br>DRILL CEMENT AND FLOAT EQUIPMENT 2329'-2466' SURFACE CASING SHOE @ 2434'.<br>DRILLED WITH 15K ON BIT AND 45 RPM. @ 450 GPM.<br><br>(REVIEW DIRECTIONAL PLANS AND PLATS AND VERIFY LAT/LONGS AND WELL ORDER. VERIFY DIRECTIONAL DRILLERS PLAN IS THE MOST RECENT AND APPROVED VERSION. REFERENCE WELLBORE DIAGRAMS FOR EXACT CASING DESIGN AND GENERAL OVERVIEW OF WELLBORE, PRIOR TO SPUD.) |

**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-511CS BLUE

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: BONANZA 1023-51 PAD

Rig Name No: PROPETRO 12/12, XTC 12/12

Event: DRILLING

Start Date: 5/16/2012

End Date: 6/15/2012

Active Datum: RKB @5,312.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/23/E/5/0/0/26/PM/S/1634/E/0/1030/0/0

| Date      | Time<br>Start-End | Duration<br>(hr) | Phase  | Code | Sub<br>Code | P/U | MD From<br>(usft) | Operation   |
|-----------|-------------------|------------------|--------|------|-------------|-----|-------------------|---|
|           | 21:00 - 0:00      | 3.00             | DRLPRO | 02   | D           | P   |                   | <p>DRILL SLIDE 2466'- 2853' (387', 129'/HR)<br/>WEIGHT ON BIT 19-23K. AVERAGE WEIGHT ON BIT 21K.<br/>ROTARY RPM 60. MUD MOTOR RPM 103.<br/>STROKES PER MINUTE 115 GALLONS PER MINUTE 517.<br/>ON/OFF PSI 1500/1050. DIFFERENTIAL 450.<br/>TORQUE HIGH/LOW 8000/6900. OFF BOTTOM TORQUE 3300<br/>STRING WEIGHT UP/DOWN/ROT 101/70/78. DRAG 23K.<br/>COME OUT OF SHOE @ 18 DEGREES. SLIDE FOR TURN AND TO HOLD FOR 300'.<br/>17' SOUTH 13' WEST OF LINE @ 2836'.<br/>SLIDE 70' AT 80'/HR.<br/>SLIDE 18% ROTATE 82%.<br/>RUNNING 2 CENTRIFUGES AND DE WATERING.( WT 8.5 VIS 27. )<br/>USED 21 BBLS DRILL WATER FOR HOLE VOLUME.<br/>LOSS 18 BBLS DRILL WATER INTO FORMATION. (LOSING 6 BBLS HR)<br/>(ADD 30 BBLS OF DRILL WATER TO PITS FOR VOLUME)<br/>NO FLARE.<br/>BOP DRILL 35 SEC</p>           |
| 6/12/2012 | 0:00 - 5:30       | 5.50             | DRLPRO | 02   | D           | P   |                   | <p>DRILL SLIDE 2853'- 3600' (747',136'/HR)<br/>WEIGHT ON BIT 19-23K. AVERAGE WEIGHT ON BIT 21K.<br/>ROTARY RPM 60. MUD MOTOR RPM 103.<br/>STROKES PER MINUTE 115 GALLONS PER MINUTE 517.<br/>ON/OFF PSI 1800/1325. DIFFERENTIAL 475.<br/>TORQUE HIGH/LOW 8700/6700. OFF BOTTOM TORQUE 4600<br/>STRING WEIGHT UP/DOWN/ROT 106/72/84. DRAG 22K.<br/>39' SOUTH 18' WEST OF CENTER @ 3290'.<br/>SLIDE 115' AT 80'/HR.<br/>SLIDE 15% ROTATE 85%.<br/>RUNNING 2 CENTRIFUGES AND DE WATERING.( WT 8.4 VIS 26. )<br/>USED 40 BBLS DRILL WATER FOR HOLE VOLUME.<br/>LOSS 60 BBLS DRILL WATER INTO FORMATION. (LOSING 10 BBLS HR)<br/>PUMP 5% LCM SWEEPS TO HELP WITH LOSSES. (ADD 100 BBLS OF 32 VIS DRILL WATER TO PITS FOR SWEEPS)<br/>ADDING POLYMER TO SYSTEM HELP STABALIZE SHELLS.<br/>NO FLARE.</p> |
|           | 5:30 - 6:00       | 0.50             | MAINT  | 07   | A           | P   |                   | <p>SERVICE RIG.SERVICE TOP DRIVE. CHECK BRAKE ADJUSTMENT. CHECK EMERGENCY STOP BUTTONS.</p>   |



**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-51CS BLUE

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: BONANZA 1023-51 PAD

Rig Name No: PROPETRO 12/12, XTC 12/12

Event: DRILLING

Start Date: 5/16/2012

End Date: 6/15/2012

Active Datum: RKB @5,312.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/23/E/5/0/0/26/PM/S/1634/E/0/1030/0/0

| Date | Time<br>Start-End | Duration<br>(hr) | Phase  | Code | Sub<br>Code | P/U | MD From<br>(usft) | Operation  |
|------|-------------------|------------------|--------|------|-------------|-----|-------------------|--|
|      | 6:00 - 17:30      | 11.50            | DRLPRO | 02   | D           | P   |                   | <p>DRILL SLIDE 3600'- 5110' / 1510'@ 131.3'/HR.<br/>WEIGHT ON BIT 19-23K.<br/>ROTARY RPM 60. MUD MOTOR RPM 83.<br/>STROKES PER MINUTE 115 / GALLONS PER MINUTE 517.<br/>ON/OFF PSI 1800/1400. DIFFERENTIAL 400.<br/>TORQUE HIGH/LOW 9100/6800. OFF BOTTOM<br/>TORQUE 5200<br/>STRING WEIGHT UP/DOWN/ROT 120/95/105. DRAG 15K.<br/>5015' : 3'S 13'W OF CENTER<br/>SLIDE 102' AT 87'/HR.<br/>SLIDE 9.72% ROTATE 90.28%.<br/>RUNNING 2 CENTRIFUGES AND DE WATERING.( WT 8.4 VIS 26. )<br/>USED 160 BBLS FRESH WATER FOR HOLE VOLUME. 1<br/>LOSS 220 BBLS DRILL WATER INTO FORMATION. (LOOSING 20-25 BBLS HR)<br/>PUMP 5% LCM SWEEPS TO HELP WITH LOSSES.<br/>SEEPING INCREASED @ APP. 4600' TO 20-25 BARRELS PER HOUR<br/>(ADD 150 BBLS OF 32 VIS DRILL WATER TO PITS FOR SWEEPS)<br/>ADDING POLYMER TO SYSTEM HELP STABALIZE SHALES.<br/>NO FLARE.<br/>RIG SERVICE</p> |
|      | 17:30 - 18:00     | 0.50             | MAINT  | 07   | A           | P   |                   |  |
|      | 18:00 - 0:00      | 6.00             | DRLPRC | 02   | D           | P   |                   | <p>DRILL SLIDE 5110' - 5766' / 656' @ 109.3' /HR.<br/>WEIGHT ON BIT 19-23K.<br/>ROTARY RPM 60. MUD MOTOR RPM 79.<br/>STROKES PER MINUTE 110 / GALLONS PER MINUTE 494.<br/>ON/OFF PSI 1718/1548. DIFFERENTIAL 170.<br/>TORQUE HIGH/LOW 10500/8070. OFF BOTTOM<br/>TORQUE 5800<br/>STRING WEIGHT UP/DOWN/ROT 136/106/120. DRAG 16K.<br/>5015' : 3'S 13'W OF CENTER<br/>SLIDE 102' AT 87'/HR.<br/>SLIDE 9.72% ROTATE 90.28%.<br/>RUNNING 2 CENTRIFUGES AND DE WATERING.( WT 8.4 VIS 26. )<br/>USED 50 BBLS FRESH WATER FOR HOLE VOLUME. 1<br/>LOSS 150 BBLS DRILL WATER INTO FORMATION. (LOOSING 20-25 BBLS HR)<br/>PUMP 5% LCM SWEEPS TO HELP WITH LOSSES.<br/>ADDING A SACK OF SAWDUST EVERY 15 MIN. TO HELP HEAL THE FORMATION<br/>(ADD 140 BBLS OF 32 VIS DRILL WATER TO PITS FOR SWEEPS)<br/>ADDING POLYMER TO SYSTEM HELP STABALIZE SHALES.<br/>NO FLARE.</p>     |

**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-5HCS BLUE

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: BONANZA 1023-5I PAD

Rig Name No: PROPETRO 12/12, XTC 12/12

Event: DRILLING

Start Date: 5/16/2012

End Date: 6/15/2012

Active Datum: RKB @5,312.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/23/E/5/0/0/26/PM/S/1634/E/0/1030/0/0

| Date      | Time<br>Start-End | Duration<br>(hr) | Phase  | Code | Sub<br>Code | P/U | MD From<br>(usft) | Operation  |
|-----------|-------------------|------------------|--------|------|-------------|-----|-------------------|--|
| 6/13/2012 | 0:00 - 5:30       | 5.50             | DRLPRC | 02   | D           | P   |                   | DRILL SLIDE 5766'- 6242' / 476' @ 79.3' /HR.<br>WEIGHT ON BIT 19-23K.<br>ROTARY RPM 60. MUD MOTOR RPM 79.<br>STROKES PER MINUTE 110 / GALLONS PER MINUTE 494.<br>ON/OFF PSI 1718/1548. DIFFERENTIAL 170.<br>TORQUE HIGH/LOW 10500/8070. OFF BOTTOM<br>TORQUE 5800<br>STRING WEIGHT UP/DOWN/ROT 151/112/127. DRAG 24K.<br>6104' 1'N & 5'W OF CENTER<br>SLIDE 58' AT 41.1' /HR.<br>SLIDE 25.76% ROTATE 74.24%.<br>RUNNING 2 CENTRIFUGES AND DE WATERING.( WT 8.4 VIS 26. )<br>USED 0 BBLS FRESH WATER FOR HOLE VOLUME.<br>LOSS 60 BBLS DRILL WATER INTO FORMATION.<br>(LOOSING 20 BBLS HR)<br>PUMP 5% LCM SWEEPS TO HELP WITH LOSSES.<br>ADDING A SACK OF SAWDUST EVERY 20 MIN. TO HELP HEAL THE FORMATION<br>(ADD 100 BBLS OF 32 VIS DRILL WATER TO PITS FOR SWEEPS)<br>ADDING POLYMER TO SYSTEM HELP STABILIZE SHALES.<br>NO FLARE.<br>RIG SERVICE |
|           | 5:30 - 6:00       | 0.50             | MAINT  | 07   | A           | P   |                   |  |
|           | 6:00 - 17:30      | 11.50            | DRLPRC | 02   | D           | P   |                   | DRILL SLIDE 6242' - 7425' / 1183' @ 102.9' /HR.<br>WEIGHT ON BIT 19-23K.<br>ROTARY RPM 60. MUD MOTOR RPM 79.<br>STROKES PER MINUTE 110 / GALLONS PER MINUTE 494.<br>ON/OFF PSI 1718/1548. DIFFERENTIAL 170.<br>TORQUE HIGH/LOW 11500/9680. OFF BOTTOM<br>TORQUE 7440<br>STRING WEIGHT UP/DOWN/ROT 158/112/132. DRAG 24K.<br>7284' : 8'N 4'W OF CENTER<br>SLIDE 96' AT 41.2' /HR.<br>SLIDE 19.44% ROTATE 80.56%.<br>RUNNING 2 CENTRIFUGES AND DE WATERING.( WT 8.4 VIS 26. )<br>USED 50 BBLS FRESH WATER FOR HOLE VOLUME.<br>LOSS 80 BBLS DRILL WATER INTO FORMATION.<br>(LOOSING 8 BBLS HR)<br>PUMP 5% LCM SWEEPS TO HELP WITH LOSSES.<br>(ADD 140 BBLS OF 32 VIS DRILL WATER TO PITS FOR SWEEPS)<br>ADDING POLYMER TO SYSTEM HELP STABILIZE SHALES.<br>NO FLARE.<br>RIG SERVICE   |
|           | 17:30 - 18:00     | 0.50             | MAINT  | 07   | A           | P   |                   |  |

**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-511CS BLUE

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: BONANZA 1023-51 PAD

Rig Name No: PROPETRO 12/12, XTC 12/12

Event: DRILLING

Start Date: 5/16/2012

End Date: 6/15/2012

Active Datum: RKB @5,312.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/23/E/5/0/0/26/PM/S/1634/E/0/1030/0/0

| Date      | Time<br>Start-End | Duration<br>(hr) | Phase  | Code | Sub<br>Code | P/U | MD From<br>(usft) | Operation  |
|-----------|-------------------|------------------|--------|------|-------------|-----|-------------------|--|
|           | 18:00 - 0:00      | 6.00             | DRLPRC | 01   | D           | P   |                   | DRILL SLIDE 7425' - 7969' / 544' @ 90.6'/HR.<br>WEIGHT ON BIT 19-23K.<br>ROTARY RPM 60. MUD MOTOR RPM 79.<br>STROKES PER MINUTE 110 / GALLONS PER MINUTE 494.<br>ON/OFF PSI 2175/1975. DIFFERENTIAL 200.<br>TORQUE HIGH/LOW 11500/10100. OFF BOTTOM<br>TORQUE 7560<br>STRING WEIGHT UP/DOWN/ROT 163/119/138. DRAG 25K.<br>BIT POSITION: 7919' : 14'N 4'W OF CENTER<br>SLIDE 38' AT 38'/HR.<br>SLIDE 15% ROTATE 85%.<br>RUNNING 2 CENTRIFUGES CONVENTIONAL<br>USED 20 BBLS FRESH WATER FOR HOLE VOLUME.<br>LOSS 70 BBLS DRILL WATER INTO FORMATION.<br>(LOOSING 12 BBLS HR)<br>PUMP 5% LCM SWEEPS TO HELP WITH LOSSES.<br>ADDING POLYMER TO SYSTEM HELP STABILIZE SHALES.<br>WE DID A LIGHT MUD UP @ 7500' 30VIS / 8.6 MUD WEIGHT<br>NO FLARE.                        |
| 6/14/2012 | 0:00 - 5:30       | 5.50             | DRLPRC | 02   | D           | P   |                   | DRILL SLIDE 7969'- 8378' / 409' @ 74.3'/HR.<br>WEIGHT ON BIT 19-23K.<br>ROTARY RPM 60. MUD MOTOR RPM 79.<br>STROKES PER MINUTE 110 / GALLONS PER MINUTE 494.<br>ON/OFF PSI 2175/1975. DIFFERENTIAL 200.<br>TORQUE HIGH/LOW 11500/10100. OFF BOTTOM<br>TORQUE 7560<br>STRING WEIGHT UP/DOWN/ROT 163/119/138. DRAG 25K.<br>BIT POSITION: 7919' : 14'N 4'W OF CENTER<br>SLIDE 0' AT 0'/HR.<br>SLIDE 0% ROTATE 100%.<br>RUNNING 2 CENTRIFUGES CONVENTIONAL<br>USED 30 BBLS FRESH WATER FOR HOLE VOLUME.<br>PUMP 5% LCM SWEEPS TO PREP THE HOLE FOR MUD UP.<br>8.6 MW 30VIS<br>STARTED DISPLACING WITH HEAVY MUD @ 8200'<br>DISPLACED 650 BARRELS LIGHT MUD FOR 780 BBL. OF HEAVY MUD<br>LOSS 110 BBLS MUD INTO FORMATION. (LOOSING 10 BBLS HR)<br>INTERMITTENT 5' FLARE. |
|           | 5:30 - 6:00       | 0.50             | MAINT  | 07   | A           | P   |                   | RIG SERVICE  |

**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-511CS BLUE

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: BONANZA 1023-51 PAD

Rig Name No: PROPETRO 12/12, XTC 12/12

Event: DRILLING

Start Date: 5/16/2012

End Date: 6/15/2012

Active Datum: RKB @5,312.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/23/E/5/0/0/26/PM/S/1634/E/0/1030/0/0

| Date      | Time<br>Start-End | Duration<br>(hr) | Phase  | Code | Sub<br>Code | P/U | MD From<br>(usft) | Operation  |
|-----------|-------------------|------------------|--------|------|-------------|-----|-------------------|--|
|           | 6:00 - 7:30       | 1.50             | DRLPRC | 02   | D           | P   |                   | DRILL SLIDE 8378'-8486' / 108'@ 72'/HR.<br>WEIGHT ON BIT 19-23K.<br>ROTARY RPM 60. MUD MOTOR RPM 79.<br>STROKES PER MINUTE 110 / GALLONS PER MINUTE 494.<br>ON/OFF PSI 2590/2310. DIFFERENTIAL 280.<br>TORQUE HIGH/LOW 11500/10100. OFF BOTTOM<br>TORQUE 7560<br>STRING WEIGHT UP/DOWN/ROT 163/119/138. DRAG 25K.<br>BIT POSITION: 7919' : 14'N 4'W OF CENTER<br>SLIDE 0' AT 0'/HR.<br>SLIDE 0% ROTATE 100%.<br>RUNNING 2 CENTRIFUGES CONVENTIONAL<br>LIGHT LOSS APP. 20 BBL.<br>10.9 MW 36 VIS<br>NO FLARE. |
|           | 7:30 - 10:00      | 2.50             | DRLPRC | 05   | C           | P   |                   | CIRCULATE AND CONDITION THE MUD<br>40 VIS 11.1 MW<br>CIRCULATED UNTIL THE CUTTINGS ON THE SHAKER<br>SLOWED DOWN  |
|           | 10:00 - 14:00     | 4.00             | DRLPRC | 06   | E           | P   |                   | WE MADE A 40 JOINT WIPER TRIP<br>HAD TO PUMP 2 JOINTS OUT F/ 9200'-9110'<br>TRIPPED BACK IN THE HOLE AND WASHED THE<br>LAST 2 JOINTS DOWN  |
|           | 14:00 - 15:30     | 1.50             | DRLPRC | 05   | C           | P   |                   | CIRCULATED AND CONDITIONED TO LAY DOWN<br>DRILL PIPE   |
|           | 15:30 - 22:00     | 6.50             | DRLPRC | 06   | A           | P   |                   | LAYING DOWN DRILL PIPE AND THE BHA TO RUN<br>CASING.   |
|           | 22:00 - 22:30     | 0.50             | DRLPRC | 14   | B           | P   |                   | NO LOGS AS PER ENGINEERING<br>PULLED THE WEAR BUSHING  |
|           | 22:30 - 0:00      | 1.50             | CSGPRO | 12   | C           | P   |                   | HELD A SAFETY MEETING WITHKIMSEY CASING<br>CREW. RIGGED UP THE CASING TOOLS AND<br>BEGAN RUNNING CASING.   |
| 6/15/2012 | 0:00 - 6:00       | 6.00             | CSGPRO | 12   | C           | P   |                   | CASING DEPTH@ MIDNIGHT 850'<br>RAN 197 TOTAL JTS. OF CASING (77 JOINTS OF<br>4.5"/11.6# / I-80/ LTC + 1 MARKER) AND (12 JTS.<br>OF 4.5" / 11.6# / P-110/ DQX) + (106 JTS. OF 4.5"/<br>11.6# / I-80/ DQX) + ( 1-DQX CROSS OVER).<br>LANDED @ 8467.47', FLOAT COLLAR @ 8420.40',<br>MESA VERDE MARKER @ 5971.91', CROSS OVER<br>JT. @ 5024.78'.  |
|           | 6:00 - 7:30       | 1.50             | CSGPRO | 05   | D           | P   |                   | CIRCULATED THE CASING<br>80 STROKES / 660 PSI / 360 GALLONS PER MINUTE<br>HAD A 10' FLARE ON BOTTOMS UP<br>HELD A SAFETY MEETING WITH BJ   |

**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-511CS BLUE

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: BONANZA 1023-51 PAD

Rig Name No: PROPETRO 12/12, XTC 12/12

Event: DRILLING

Start Date: 5/16/2012

End Date: 6/15/2012

Active Datum: RKB @5,312.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/23/E/5/0/0/26/PM/S/1634/E/0/1030/0/0

| Date | Time<br>Start-End | Duration<br>(hr) | Phase  | Code | Sub<br>Code | P/U | MD From<br>(usft) | Operation  |
|------|-------------------|------------------|--------|------|-------------|-----|-------------------|--|
|      | 7:30 - 10:00      | 2.50             | CSGPRO | 12   | E           | P   |                   | PRESSURE TEST TO 4000 PSI. PUMP 25 BBLS OF FRESH WATER. PUMP 168 BBLS (420 SX) OF PREMIUM LITE II LEAD CEMENT, 12.0 PPG 2.26 YLD, .05 LB/SACK OF STATIC FREE + .15%BWOC R-3 +.25 LBS/SACK CELLO FLAKE + 5 LBS/SACK KOL-SEAL + .6% BWOC FL-52 + .4%BWOC SODIUM METASILICATE + 6% BWOC BENTONITE + 119.7%FRESH WATER . FOLLOWED BY 209 BBLS (900 SX) OF 14.3# 1.31 YD 5.91 GAL/SK. POZ 50/50 TAIL CEMENT + 2% BWOC BENTONITE + .005 LB/SACK STATIC FREE + 10% BWOW SODIUM CHLORIDE + .15%BWOC R-3 + .002GPS FP-6L + 58.7% FRESH WATER . SHUT DOWN AND FLUSH LINES. DROP PLUG AND DISPLACE W/ 131 BBLS OF FRESH WATER TREATED WITH CLAYFIX AND MAGNACIDE. FULL RETURNS WITH 0 BBLS OF WATER AND NO CEMENT. LIFT PSI OF 2168 / BUMP PLUG 2800 PSI. . PRESSURE HELD 5 MINS. FLOAT HELD. FLOW BACK 1.5 BBLS. EST. TOC FOR LEAD 700', EST TOC FOR TAIL 3316'. RIG DOWN CEMENTERS. |
|      | 10:00 - 10:30     | 0.50             | CSGPRO | 12   | C           | P   |                   | PULLED THE LANDING JOINT AND INSTALLED THE PACK OFF  |
|      | 10:30 - 11:30     | 1.00             | RDMO   | 14   | A           | P   |                   | NIPPLED DOWN THE BOP AND PREPPED THE RIG TO SKID<br>RIG RELEASED @ 11:30   |



## 1 General

### 1.1 Customer Information

|                |                   |
|----------------|-------------------|
| Company        | US ROCKIES REGION |
| Representative |                   |
| Address        |                   |

### 1.2 Well/Wellbore Information

|              |   |               |  |
|--------------|---|---------------|--|
| Well         | BONANZA 1023-5I1CS BLUE                           | Wellbore No.  | OH                                       |
| Well Name    | BONANZA 1023-5I1CS                                | Wellbore Name | BONANZA 1023-5I1CS                       |
| Report No.   | 1   | Report Date   | 9/5/2012                                 |
| Project      | UTAH-UINTAH                                       | Site          | BONANZA 1023-5I PAD                      |
| Rig Name/No. |   | Event         | COMPLETION                               |
| Start Date   | 9/5/2012  | End Date      | 9/21/2012                                |
| Spud Date    | 5/27/2012   | Active Datum  | RKB @5,312.00usft (above Mean Sea Level) |
| UWI          | NE/SE/O/10/S/23/E/5/O/0/26/PM/S/1634/E/O/1030/O/O |               |  |

### 1.3 General

|                     |  |                 |  |            |  |
|---------------------|--|-----------------|--|------------|--|
| Contractor          |  | Job Method      |  | Supervisor |  |
| Perforated Assembly |  | Conveyed Method |  |            |  |

### 1.4 Initial Conditions

|                   |         |                    |  |                  |                               |                          |                  |
|-------------------|---------|--------------------|--|------------------|-------------------------------|--------------------------|------------------|
| Fluid Type        |         | Fluid Density      |  | Gross Interval   | 5,844.0 (usft)-8,368.0 (usft) | Start Date/Time          | 9/5/2012 12:00AM |
| Surface Press     |         | Estimate Res Press |  | No. of Intervals | 49                            | End Date/Time            | 9/5/2012 12:00AM |
| TVD Fluid Top     |         | Fluid Head         |  | Total Shots      | 216                           | Net Perforation Interval | 65.00 (usft)     |
| Hydrostatic Press |         | Press Difference   |  | Avg Shot Density | 3.32 (shot/ft)                | Final Surface Pressure   |                  |
| Balance Cond      | NEUTRAL |                    |  |                  |                               | Final Press Date         |                  |

### 1.5 Summary

## 2 Intervals

### 2.1 Perforated Interval

| Date                | Formation/<br>Reservoir | CCL@<br>(usft) | CCL-T<br>S<br>(usft) | MD Top<br>(usft) | MD Base<br>(usft) | Shot<br>Density<br>(shot/ft) | Misfires/<br>Add. Shot | Diameter<br>(in) | Carr Type /Stage No | Carr<br>Size<br>(in) | Phasing<br>(°) | Charge Desc /Charge<br>Manufacturer | Charge<br>Weight<br>(gram) | Reason         | Misrun |
|---------------------|-------------------------|----------------|----------------------|------------------|-------------------|------------------------------|------------------------|------------------|---------------------|----------------------|----------------|-------------------------------------|----------------------------|----------------|--------|
| 9/5/2012<br>12:00AM | WASATCH/                |                |                      | 5,844.0          | 5,847.0           | 4.00                         |                        | 0.360            | EXP/                | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |

## 2.1 Perforated Interval (Continued)

| Date                | Formation/<br>Reservoir | CCL@<br>(usft) | CCL-T<br>S<br>(usft) | MD Top<br>(usft) | MD Base<br>(usft) | Shot<br>Density<br>(shot/ft) | Misfires/<br>Add. Shot | Diamete<br>r<br>(in) | Carr Type /Stage No | Carr<br>Size<br>(in) | Phasing<br>(°) | Charge Desc /Charge<br>Manufacturer | Charge<br>Weight<br>(gram) | Reason         | Misrun |
|---------------------|-------------------------|----------------|----------------------|------------------|-------------------|------------------------------|------------------------|----------------------|---------------------|----------------------|----------------|-------------------------------------|----------------------------|----------------|--------|
| 9/5/2012<br>12:00AM | WASATCH/                |                |                      | 5,891.0          | 5,893.0           | 4.00                         |                        | 0.360                | EXP/                | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | WASATCH/                |                |                      | 5,931.0          | 5,932.0           | 4.00                         |                        | 0.360                | EXP/                | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | WASATCH/                |                |                      | 6,112.0          | 6,115.0           | 4.00                         |                        | 0.360                | EXP/                | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | WASATCH/                |                |                      | 6,156.0          | 6,159.0           | 4.00                         |                        | 0.360                | EXP/                | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 6,894.0          | 6,895.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,025.0          | 7,027.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,046.0          | 7,048.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,094.0          | 7,095.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,120.0          | 7,122.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,152.0          | 7,153.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,187.0          | 7,188.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,218.0          | 7,219.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,260.0          | 7,261.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,272.0          | 7,273.0           | 4.00                         |                        | 0.360                | EXP/                | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,286.0          | 7,287.0           | 4.00                         |                        | 0.360                | EXP/                | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,302.0          | 7,303.0           | 4.00                         |                        | 0.360                | EXP/                | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,340.0          | 7,342.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,355.0          | 7,357.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,385.0          | 7,387.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,427.0          | 7,429.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,487.0          | 7,488.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |

## 2.1 Perforated Interval (Continued)

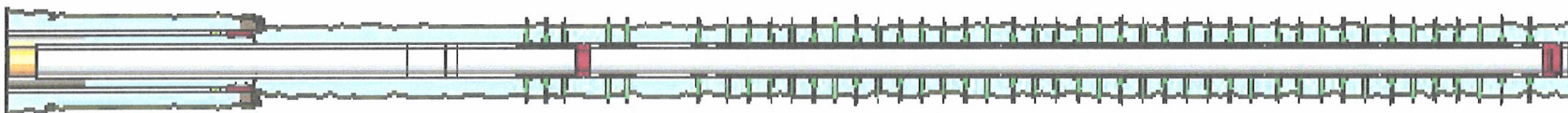
| Date                | Formation/<br>Reservoir | CCL@<br>(usft) | CCL-T<br>S<br>(usft) | MD Top<br>(usft) | MD Base<br>(usft) | Shot<br>Density<br>(shot/ft) | Misfires/<br>Add. Shot | Diamete<br>r<br>(in) | Carr Type /Stage No | Carr<br>Size<br>(in) | Phasing<br>(°) | Charge Desc /Charge<br>Manufacturer | Charge<br>Weight<br>(gram) | Reason         | Misrun |
|---------------------|-------------------------|----------------|----------------------|------------------|-------------------|------------------------------|------------------------|----------------------|---------------------|----------------------|----------------|-------------------------------------|----------------------------|----------------|--------|
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,506.0          | 7,507.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,542.0          | 7,543.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,579.0          | 7,580.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,605.0          | 7,606.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,632.0          | 7,633.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,652.0          | 7,653.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,663.0          | 7,664.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,696.0          | 7,697.0           | 4.00                         |                        | 0.360                | EXP/                | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,720.0          | 7,721.0           | 4.00                         |                        | 0.360                | EXP/                | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,747.0          | 7,748.0           | 4.00                         |                        | 0.360                | EXP/                | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,760.0          | 7,761.0           | 4.00                         |                        | 0.360                | EXP/                | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,787.0          | 7,788.0           | 4.00                         |                        | 0.360                | EXP/                | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,814.0          | 7,815.0           | 4.00                         |                        | 0.360                | EXP/                | 3.375                | 90.00          |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,882.0          | 7,883.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,928.0          | 7,929.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,954.0          | 7,955.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,968.0          | 7,969.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,975.0          | 7,976.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 7,999.0          | 8,000.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 8,062.0          | 8,063.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 8,082.0          | 8,083.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |

## 2.1 Perforated Interval (Continued)

| Date                | Formation/<br>Reservoir | CCL@<br>(usft) | CCL-T<br>S<br>(usft) | MD Top<br>(usft) | MD Base<br>(usft) | Shot<br>Density<br>(shot/ft) | Misfires/<br>Add. Shot | Diamete<br>r<br>(in) | Carr Type /Stage No | Carr<br>Size<br>(in) | Phasing<br>(°) | Charge Desc /Charge<br>Manufacturer | Charge<br>Weight<br>(gram) | Reason         | Misrun |
|---------------------|-------------------------|----------------|----------------------|------------------|-------------------|------------------------------|------------------------|----------------------|---------------------|----------------------|----------------|-------------------------------------|----------------------------|----------------|--------|
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 8,126.0          | 8,127.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 8,150.0          | 8,151.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 8,192.0          | 8,193.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 8,219.0          | 8,220.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 8,257.0          | 8,259.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |
| 9/5/2012<br>12:00AM | MESAVERDE/              |                |                      | 8,366.0          | 8,368.0           | 3.00                         |                        | 0.360                | EXP/                | 3.375                | 120.00         |                                     | 23.00                      | PRODUCTIO<br>N |        |

## 3 Plots

## 3.1 Wellbore Schematic



**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-511CS BLUE

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: BONANZA 1023-51 PAD

Rig Name No: GWS 1/1

Event: COMPLETION

Start Date: 9/5/2012

End Date: 9/21/2012

Active Datum: RKB @5,312.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/23/E/5/0/0/26/PM/S/1634/E/0/1030/0/0

| Date      | Time<br>Start-End | Duration<br>(hr) | Phase | Code | Sub<br>Code | P/U | MD From<br>(usft) | Operation   |
|-----------|-------------------|------------------|-------|------|-------------|-----|-------------------|---|
| 5/27/2012 | -                 |                  |       |      |             |     |                   |   |
| 5/28/2012 | -                 |                  |       |      |             |     |                   |   |
| 9/5/2012  | 12:00 - 13:30     | 1.50             | FRAC  | 33   | C           | P   |                   | FILL SURFACE CSG. MIRU B&C QUICK TEST.<br>PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 25 PSI.<br>PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 29 PSI.<br>1ST PSI TEST T/ 7000 PSI. HELD FOR 30 MIN LOST 79 PSI.<br>NO COMMUNICATION OR MIGRATION WITH SURFACE CSG<br>BLEED OFF PSI. MOVE T/ NEXT WELL.<br>SWFW |
| 9/7/2012  | 7:00 - 10:00      | 3.00             | COMP  | 37   |             | P   |                   | PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF AS PER PERF DESIGN. POOH. SWFW  |
| 9/11/2012 | 7:30 - 7:45       | 0.25             | COMP  | 48   | B           | P   |                   | HELD SAFETY MEETING, HIGH PRESURE   |



**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-511CS BLUE

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: BONANZA 1023-51 PAD

Rig Name No: GWS 1/1

Event: COMPLETION

Start Date: 9/5/2012

End Date: 9/21/2012

Active Datum: RKB @5,312.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/23/E/5/0/0/26/PM/S/1634/E/0/1030/0/0

| Date      | Time<br>Start-End | Duration<br>(hr) | Phase | Code | Sub<br>Code | P/U | MD From<br>(usft) | Operation  |
|-----------|-------------------|------------------|-------|------|-------------|-----|-------------------|--|
|           | 7:45 - 18:00      | 10.25            | COMP  | 36   | B           | P   |                   | <p>PRESSURE TEST PUMP &amp; LINES 7500 PSI 15, MIN LOST PSI</p> <p>FRAC STG 1)WHP 1,100 PSI, BRK 3,800 PSI @ 5.6 BPM. ISIP 2,339 PSI, FG .72.<br/>CALC HOLES OPEN @ 49.5 BPM @ 4,000 PSI =100% HOLES OPEN. (24/24 HOLES OPEN)<br/>ISIP 2,245 PSI, FG .70, NPI -94 PSI.<br/>MP 4,369 PSI, MR 53 BPM, AP 4,048 PSI, AR 52.4 BPM<br/>PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 2)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8113' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 2)WHP 1,925 PSI, BRK 2,374 PSI @ 4.6 BPM. ISIP 2,075 PSI, FG .69.<br/>CALC HOLES OPEN @ 50.9 BPM @ 3,987 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN)<br/>ISIP 2,361 PSI, FG .69, NPI 286 PSI.<br/>MP 4,782 PSI, MR 50.9 BPM, AP 4,019 PSI, AR 50.6 BPM<br/>PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 3)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7,845' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 3)WHP 2,070 PSI, BRK 5,063 PSI @ 4.7 BPM. ISIP 2,807 PSI, FG .79.<br/>CALC HOLES OPEN @ 50.4 BPM @ 4,100 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN)<br/>ISIP 1,928 PSI, FG .68, NPI -879 PSI.<br/>MP 4,249 PSI, MR 50.5 BPM, AP 3,950 PSI, AR 50.4 BPM<br/>PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 4)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7,686' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW<br/>SWMFN.<br/>HSM, HIGH PSI LINES</p> |
| 9/12/2012 | 6:45 - 7:00       | 0.25             | COMP  | 48   |             | P   |                   |  |

**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-51CS BLUE

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: BONANZA 1023-51 PAD

Rig Name No: GWS 1/1

Event: COMPLETION

Start Date: 9/5/2012

End Date: 9/21/2012

Active Datum: RKB @5,312.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/23/E/5/0/0/26/PM/S/1634/E/0/1030/0/0

| Date | Time<br>Start-End | Duration<br>(hr) | Phase | Code | Sub<br>Code | P/U | MD From<br>(usft) | Operation  |
|------|-------------------|------------------|-------|------|-------------|-----|-------------------|--|
|      | 7:00 - 18:00      | 11.00            | COMP  | 36   | B           | P   |                   | <p>FRAC STG 4)WHP 505 PSI, BRK 1397 PSI @ 4.9 BPM. ISIP 1033 PSI, FG .57.<br/>CALC HOLES OPEN @ 49.9 BPM @ 3550 PSI = 88% HOLES OPEN. (21/24 HOLES OPEN)<br/>ISIP 1560 PSI, FG .64, NPI 527 PSI.<br/>MP 3624 PSI, MR 53 BPM, AP 3527 PSI, AR 52.2 BPM<br/>PUMPED 30/50 OTTAWA SAND IN THIS STAGE<br/>X-OVER FOR W/L</p> <p>PERF STG 5)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7459' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 5)WHP 1201 PSI, BRK 2562 PSI @ 5.0 BPM. ISIP 1502 PSI, FG .64.<br/>CALC HOLES OPEN @ 54.5 BPM @ 3568 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN)<br/>ISIP 1492 PSI, FG .63, NPI -10 PSI.<br/>MP 3568 PSI, MR 55.1 BPM, AP 3337 PSI, AR 55 BPM<br/>PUMPED 30/50 OTTAWA SAND IN THIS STAGE<br/>X-OVER FOR W/L</p> <p>PERF STG 6)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 &amp; 120 DEG PHASING. RIH SET CBP @ 7330' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 6)WHP 419 PSI, BRK 2233 PSI @ 4.7 BPM. ISIP 1501 PSI, FG .64.<br/>CALC HOLES OPEN @ 55 BPM @ 3412 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN)<br/>ISIP 1772 PSI, FG .68, NPI 271 PSI.<br/>MP 3552 PSI, MR 55.1 BPM, AP 3502 PSI, AR 55 BPM<br/>PUMPED 30/50 OTTAWA SAND IN THIS STAGE<br/>X-OVER FOR W/L</p> <p>PERF STG 7)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7141' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 7)WHP 140 PSI, BRK 4232 PSI @ 4.7 BPM. ISIP 1941 PSI, FG .71.<br/>CALC HOLES OPEN @ 54.9 BPM @ 4075 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN)<br/>ISIP 1930 PSI, FG .71, NPI -11 PSI.<br/>MP 4083 PSI, MR 54.9 BPM, AP 4035 PSI, AR 54.8 BPM<br/>PUMPED 30/50 OTTAWA SAND IN THIS STAGE<br/>X-OVER FOR W/L</p> <p>PERF STG 8)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 6189' P/U PERF AS PER DESIGN. SWIFN.</p> |

**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-5HCS BLUE

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: BONANZA 1023-5I PAD

Rig Name No: GWS 1/1

Event: COMPLETION

Start Date: 9/5/2012

End Date: 9/21/2012

Active Datum: RKB @5,312.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/23/E/5/0/0/26/PM/S/1634/E/0/1030/0/0

| Date      | Time<br>Start-End | Duration<br>(hr) | Phase  | Code | Sub<br>Code | P/U | MD From<br>(usft) | Operation  |
|-----------|-------------------|------------------|--------|------|-------------|-----|-------------------|--|
| 9/13/2012 | 7:00 - 18:00      | 11.00            | COMP   | 36   | B           | P   |                   | <p>FRAC STG 8)WHP 558 PSI, BRK 2940 PSI @ 5.0 BPM. ISIP 2736 PSI, FG .88.<br/> CALC HOLES OPEN @ 54.4 BPM @ 5051 PSI = 96% HOLES OPEN. (23/24 HOLES OPEN)<br/> ISIP 2427 PSI, FG .83, NPI -309 PSI.<br/> MP 5151 PSI, MR 54.6 BPM, AP 4969 PSI, AR 54.4 BPM<br/> PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 9)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 5962' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 9)WHP 1136 PSI, BRK 4752 PSI @ 4.9 BPM. ISIP 1998 PSI, FG .77.<br/> CALC HOLES OPEN @ 54.6 BPM @ 3408 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN)<br/> ISIP 1680 PSI, FG .72, NPI -318 PSI.<br/> MP 3559 PSI, MR 54.9 BPM, AP 3456 PSI, AR 54.8 BPM<br/> PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PU 4 1/2 8K HAL CBP. RIH SET KILL PLUG @ 5794'. POOH. SWI. DONE FRACING THIS WELL.</p> <p>TOTAL SAND = 222,400 LBS<br/> TOTAL CLFL = 10,940 BBL<br/> HSM, SLIPS, TRIPS &amp; FALLS, RIGGING UP, PU TBG</p> |
| 9/20/2012 | 7:00 - 7:15       | 0.25             | DRLOUT | 48   |             | P   |                   |  |

**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-511CS BLUE

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: BONANZA 1023-51 PAD

Rig Name No: GWS 1/1

Event: COMPLETION

Start Date: 9/5/2012

End Date: 9/21/2012

Active Datum: RKB @5,312.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/23/E/5/0/0/26/PM/S/1634/E/0/1030/0/0

| Date      | Time<br>Start-End | Duration<br>(hr) | Phase  | Code | Sub<br>Code | P/U | MD From<br>(usft) | Operation  |
|-----------|-------------------|------------------|--------|------|-------------|-----|-------------------|--|
|           | 7:15 - 17:00      | 9.75             | DRLOUT | 31   | I           | P   |                   | <p>MIRU, SPOT EQUIP, ND WH, NU BOP, RU FLOOR &amp; TBG EQUIP, SPOT TBG TRAILER INSTAL HAND RAILS, PU BHA, TALLY &amp; PU TBG, RU P/S, BREAK CIRC, P/T BOP TO 3,000 PSI, TEST GOOD, SURFACE CSG VALVE OPEN &amp; LOCKED, D/O PLUGS.</p> <p>C/O 10' SAND, TAG 1ST PLUG @ 5,794' DRL PLUG IN 12 MIN. 0 PSI INCREASE RIH, CSG PRESS 0 PSI. ((NO FLOW W/O PUMP))</p> <p>C/O 30' SAND, TAG 2ND PLUG @ 5,962' DRL PLUG IN 11 MIN. -100 PSI INCREASE RIH, CSG PRESS 0 PSI. ((NO FLOW W/O PUMP))</p> <p>C/O 25' SAND, TAG 3RD PLUG @ 6,193' DRL PLUG IN 12 MIN. 400 PSI INCREASE RIH, CSG PRESS 100 PSI.</p> <p>C/O 45' SAND, TAG 4TH PLUG @ 7,141' DRL PLUG IN 10 MIN. 400 PSI INCREASE RIH, CSG PRESS 250 PSI.</p> <p>C/O 25' SAND, TAG 5TH PLUG @ 7,330' DRL PLUG IN 11 MIN. 0 PSI INCREASE RIH, CSG PRESS 300 PSI.</p> <p>LET WELL CLEAN UP FOR 30 MIN, D/O REMAINING PLUGS IN AM, SWI, SDFN.</p> |
| 9/21/2012 | 7:00 - 7:15       | 0.25             | DRLOUT | 48   |             | P   |                   | <p>HSM, SLIPS, TRIPS &amp; FALLS, PRESS, LANDING TBG</p>   |

**US ROCKIES REGION**  
**Operation Summary Report**

Well: BONANZA 1023-5HCS BLUE

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: BONANZA 1023-5I PAD

Rig Name No: GWS 1/1

Event: COMPLETION

Start Date: 9/5/2012

End Date: 9/21/2012

Active Datum: RKB @5,312.00usft (above Mean Sea Level)

UWI: NE/SE/0/10/S/23/E/5/0/0/26/PM/S/1634/E/0/1030/0/0

| Date | Time<br>Start-End | Duration<br>(hr) | Phase  | Code | Sub<br>Code | P/U | MD From<br>(usft) | Operation  |
|------|-------------------|------------------|--------|------|-------------|-----|-------------------|--|
|      | 7:15 - 12:00      | 4.75             | DRLOUT | 44   | C           | P   |                   | <p>SICP 2,300 PSI, OPEN WELL TO BLEED DOWN PRESS OPEN RAMS, SURFACE CSG VALVE OPEN &amp; LOCKED, D/O REMAINING 4 PLUGS.</p> <p>C/O 30' SAND, TAG 6TH PLUG @ 7,459' DRL PLUG IN 12 MIN. 300 PSI INCREASE RIH, CSG PRESS 400 PSI.</p> <p>C/O 45' SAND, TAG 7TH PLUG @ 7,686' DRL PLUG IN 10 MIN. 300 PSI INCREASE RIH, CSG PRESS 300 PSI.</p> <p>C/O 25' SAND, TAG 8TH PLUG @ 7,845' DRL PLUG IN 11 MIN. 600 PSI INCREASE RIH, CSG PRESS 400 PSI.</p> <p>C/O 20' SAND, TAG 9TH PLUG @ 8,113' DRL PLUG IN 10 MIN. 300 PSI INCREASE RIH, CSG PRESS 450 PSI.</p> <p>PBTD @ 8,420', BTM PERF @ 8,368', RIH TAGGED @ 8,390', C/O FROM 8,390' TO PBTD, 52' PAST BTM PERF W/ 265 JTS 2 3/8" L-80 TBG, LD 18 JTS, PU &amp; STRIP IN TBG HANGER &amp; LAND TBG W/ 247 JTS 2 3/8" L-80, EOT 7,840.03'.</p> <p>RD POWER SWIVEL, FLOOR &amp; TBG EQUIP, ND BOPS, NU WH, DROP BALL TO SHEAR OFF BIT 2,200 PSI, LET BIT FALL FOR 20 MIN. P/T FLOW LINE FROM WH TO HAL 9000 TO 3,000 PSI W/ RIG PUMP, NO VISIBLE LEAKS.</p> <p>TURN OVER TO FLOW BACK CREW, RD &amp; MOVE TO LAST WELL ON PAD.</p> <p>KB= 15'<br/>4 1/16" CAMERON HANGER= .83' TBG<br/>DELIVERED 283 JTS<br/>247 JTS 2 3/8" L-80 = 7,822.00'<br/>TBG USED 247 JTS<br/>POBS= 2.20'<br/>TBG RETURNED 36 JTS<br/>EOT @ 7,840.03'</p> <p>TWTR= 10,940 BBLs<br/>TWR= 3,700 BBLs<br/>TWLTR= 7,240 BBLs<br/>WELL TURNED TO SALES @ 1200 HR ON 9/21/2012. 500 MCFD, 2160 BWPD, FCP 1760#, FTP 1125#, 20/64" CK.</p> |
|      | 12:00 - 12:00     | 0.00             | DRLOUT | 50   |             |     |                   |  |



Project: UTAH - UTM (feet), NAD27, Zone 12N  
Site: UINTAH\_BONANZA 1023-51 PAD  
Well: BONANZA 1023-51CS  
Wellbore: BONANZA 1023-51CS  
Section:  
SHL:  
Design: BONANZA 1023-51CS (wp01)  
Latitude: 39.975241  
Longitude: -109.344324  
GL: 5297.00  
KB: 15' RKB + 5297' GL @ 5312.00ft (xtreme 12)

## FORMATION TOP DETAILS

| TVDPath | MDPath  | Formation       |
|---------|---------|-----------------|
| 4185.00 | 4297.01 | WASATCH         |
| 4785.00 | 4897.05 | top of cylinder |
| 6199.00 | 6311.08 | MESAVERDE       |
| 8374.00 | 8486.12 | SEGO            |

## WELL DETAILS: BONANZA 1023-51CS

| +N/-S | +E/-W | Northing    | Ground Level:<br>Easting | 5297.00<br>Latitude | 39.975241 | Longitude   | Slot |
|-------|-------|-------------|--------------------------|---------------------|-----------|-------------|------|
| 0.00  | 0.00  | 14521335.30 | 2104281.31               |                     |           | -109.344324 |      |

## CASING DETAILS

| TVD     | MD      | Name   | Size   |
|---------|---------|--------|--------|
| 2357.57 | 2434.87 | 8-5/8" | 8-5/8" |



Azimuths to True North  
Magnetic North: 10.88°

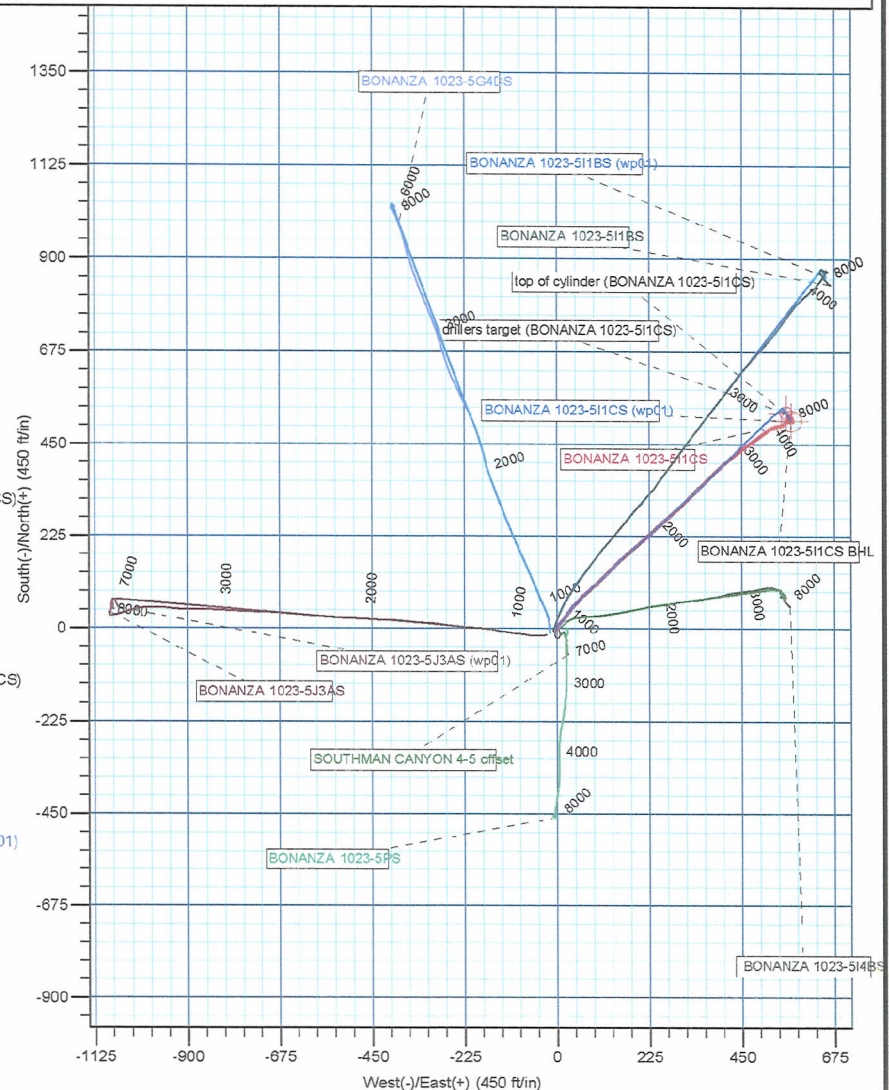
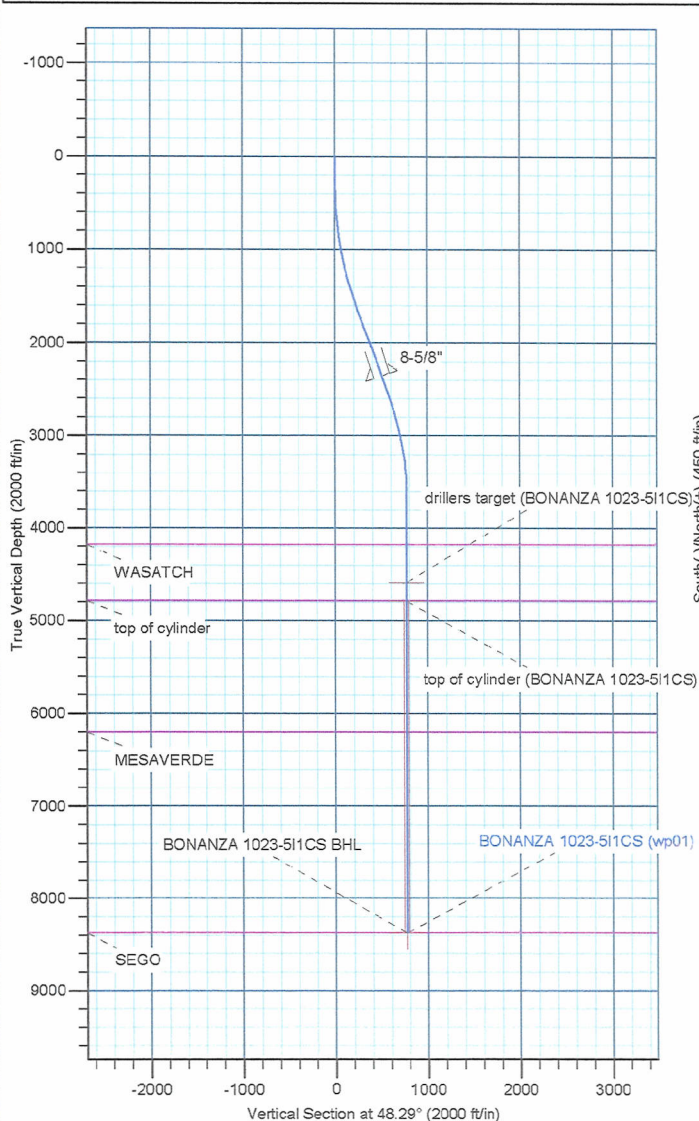
Magnetic Field  
Strength: 52239.1nT  
Dip Angle: 65.85°  
Date: 5/30/2012  
Model: IGRF2010

## DESIGN TARGET DETAILS

| Name                                | TVD     | +N/-S  | +E/-W  | Northing    | Easting    | Latitude  | Longitude   | Shape                  |
|-------------------------------------|---------|--------|--------|-------------|------------|-----------|-------------|------------------------|
| drillers target (BONANZA 1023-51CS) | 4585.00 | 528.46 | 557.54 | 14521874.02 | 2104828.94 | 39.976692 | -109.342334 | Circle (Radius: 15.00) |
| top of cylinder (BONANZA 1023-51CS) | 4785.00 | 527.05 | 558.47 | 14521872.62 | 2104829.89 | 39.976688 | -109.342331 | Point                  |
| BONANZA 1023-51CS BHL               | 8374.00 | 508.46 | 570.54 | 14521854.26 | 2104842.30 | 39.976637 | -109.342288 | Circle (Radius: 25.00) |

## SECTION DETAILS

| MD      | Inc   | Azi    | TVD     | +N/-S  | +E/-W  | Dleg | TFace  | Vsect  |
|---------|-------|--------|---------|--------|--------|------|--------|--------|
| 2411.00 | 18.55 | 44.90  | 2334.94 | 352.13 | 355.77 | 0.00 | 0.00   | 499.88 |
| 2791.00 | 18.55 | 44.90  | 2695.20 | 437.76 | 441.10 | 0.00 | 0.00   | 620.56 |
| 3726.59 | 0.75  | 146.31 | 3614.63 | 539.00 | 550.51 | 2.00 | 177.71 | 769.60 |
| 4697.04 | 0.75  | 146.31 | 4585.00 | 528.46 | 557.54 | 0.00 | 0.00   | 767.83 |
| 4828.45 | 0.35  | 147.01 | 4716.40 | 527.41 | 558.24 | 0.30 | 179.37 | 767.65 |
| 8486.12 | 0.35  | 147.01 | 8374.00 | 508.46 | 570.54 | 0.00 | 0.00   | 764.23 |



# Anadarko Petroleum Corp

## Survey Report

|                  |                                    |                                     |  |
|------------------|------------------------------------|-------------------------------------|--|
| <b>Company:</b>  | US ROCKIES REGION PLANNING         | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-511CS                    |
| <b>Project:</b>  | UTAH - UTM (feet), NAD27, Zone 12N | <b>TVD Reference:</b>               | 15' RKB + 5297' GL @ 5312.00ft (xtreme 12) |
| <b>Site:</b>     | UINTAH_BONANZA 1023-51 PAD         | <b>MD Reference:</b>                | 15' RKB + 5297' GL @ 5312.00ft (xtreme 12) |
| <b>Well:</b>     | BONANZA 1023-511CS                 | <b>North Reference:</b>             | True                                       |
| <b>Wellbore:</b> | BONANZA 1023-511CS                 | <b>Survey Calculation Method:</b>   | Minimum Curvature                          |
| <b>Design:</b>   | BONANZA 1023-511CS                 | <b>Database:</b>                    | edmp                                       |

|                    |  |                      |                |
|--------------------|--|----------------------|----------------|
| <b>Project</b>     | UTAH - UTM (feet), NAD27, Zone 12N             |                      |                |
| <b>Map System:</b> | Universal Transverse Mercator (US Survey Feet) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)                        |                      |                |
| <b>Map Zone:</b>   | Zone 12N (114 W to 108 W)                      |                      |                |

|                              |                            |                     |                    |                          |             |
|------------------------------|----------------------------|---------------------|--------------------|--------------------------|-------------|
| <b>Site</b>                  | UINTAH_BONANZA 1023-51 PAD |                     |                    |                          |             |
| <b>Site Position:</b>        |                            | <b>Northing:</b>    | 14,521,340.20 usft | <b>Latitude:</b>         | 39.975254   |
| <b>From:</b>                 | Lat/Long                   | <b>Easting:</b>     | 2,104,289.90 usft  | <b>Longitude:</b>        | -109.344293 |
| <b>Position Uncertainty:</b> | 0.00 ft                    | <b>Slot Radius:</b> | 13-3/16 "          | <b>Grid Convergence:</b> | 1.06 °      |

|                             |                    |         |                            |                    |                      |             |
|-----------------------------|--------------------|---------|----------------------------|--------------------|----------------------|-------------|
| <b>Well</b>                 | BONANZA 1023-511CS |         |                            |                    |                      |             |
| <b>Well Position</b>        | <b>+N/-S</b>       | 0.00 ft | <b>Northing:</b>           | 14,521,335.30 usft | <b>Latitude:</b>     | 39.975241   |
|                             | <b>+E/-W</b>       | 0.00 ft | <b>Easting:</b>            | 2,104,281.30 usft  | <b>Longitude:</b>    | -109.344324 |
| <b>Position Uncertainty</b> |                    | 0.00 ft | <b>Wellhead Elevation:</b> | ft                 | <b>Ground Level:</b> | 5,297.00 ft |

|                  |                    |                    |                    |                  |                       |
|------------------|--------------------|--------------------|--------------------|------------------|-----------------------|
| <b>Wellbore</b>  | BONANZA 1023-511CS |                    |                    |                  |                       |
| <b>Magnetics</b> | <b>Model Name</b>  | <b>Sample Date</b> | <b>Declination</b> | <b>Dip Angle</b> | <b>Field Strength</b> |
|                  |                    |                    | (°)                | (°)              | (nT)                  |
|                  | IGRF2010           | 5/30/2012          | 10.88              | 65.85            | 52,239                |

|                          |                         |               |              |                      |       |
|--------------------------|-------------------------|---------------|--------------|----------------------|-------|
| <b>Design</b>            | BONANZA 1023-511CS      |               |              |                      |       |
| <b>Audit Notes:</b>      |                         |               |              |                      |       |
| <b>Version:</b>          | 1.0                     | <b>Phase:</b> | ACTUAL       | <b>Tie On Depth:</b> | 11.00 |
| <b>Vertical Section:</b> | <b>Depth From (TVD)</b> | <b>+N/-S</b>  | <b>+E/-W</b> | <b>Direction</b>     |       |
|                          | (ft)                    | (ft)          | (ft)         | (°)                  |       |
|                          | 0.00                    | 0.00          | 0.00         | 48.73                |       |

|                       |             |                                |                  |                    |
|-----------------------|-------------|--------------------------------|------------------|--------------------|
| <b>Survey Program</b> | <b>Date</b> | 7/10/2012                      |                  |                    |
| <b>From</b>           | <b>To</b>   | <b>Survey (Wellbore)</b>       | <b>Tool Name</b> | <b>Description</b> |
| (ft)                  | (ft)        |                                |                  |                    |
| 175.00                | 2,411.00    | Survey #1 (BONANZA 1023-511CS) | MWD              | MWD - STANDARD     |
| 2,564.00              | 8,486.00    | Survey #2 (BONANZA 1023-511CS) | MWD              | MWD - STANDARD     |

|                 |                    |                |                 |              |              |                 |                    |                    |                    |  |
|-----------------|--------------------|----------------|-----------------|--------------|--------------|-----------------|--------------------|--------------------|--------------------|--|
| <b>Survey</b>   |                    |                |                 |              |              |                 |                    |                    |                    |  |
| <b>Measured</b> | <b>Inclination</b> | <b>Azimuth</b> | <b>Vertical</b> | <b>+N/-S</b> | <b>+E/-W</b> | <b>Vertical</b> | <b>Dogleg</b>      | <b>Build</b>       | <b>Turn</b>        |  |
| <b>Depth</b>    | <b>(°)</b>         | <b>(°)</b>     | <b>Depth</b>    | <b>(ft)</b>  | <b>(ft)</b>  | <b>Section</b>  | <b>Rate</b>        | <b>Rate</b>        | <b>Rate</b>        |  |
| <b>(ft)</b>     |                    |                | <b>(ft)</b>     |              |              | <b>(ft)</b>     | <b>(°/100usft)</b> | <b>(°/100usft)</b> | <b>(°/100usft)</b> |  |
| 11.00           | 0.00               | 0.00           | 11.00           | 0.00         | 0.00         | 0.00            | 0.00               | 0.00               | 0.00               |  |
| 175.00          | 1.06               | 259.00         | 174.99          | -0.29        | -1.49        | -1.31           | 0.65               | 0.65               | 0.00               |  |
| 262.00          | 1.14               | 313.67         | 261.98          | 0.15         | -2.91        | -2.08           | 1.16               | 0.09               | 62.84              |  |
| 348.00          | 1.19               | 15.51          | 347.96          | 1.61         | -3.29        | -1.41           | 1.39               | 0.06               | 71.91              |  |
| 438.00          | 2.11               | 45.95          | 437.93          | 3.66         | -1.84        | 1.03            | 1.38               | 1.02               | 33.82              |  |
| 528.00          | 3.87               | 40.06          | 527.80          | 7.14         | 1.30         | 5.68            | 1.98               | 1.96               | -6.54              |  |
| 618.00          | 4.66               | 43.76          | 617.55          | 12.10        | 5.78         | 12.33           | 0.93               | 0.88               | 4.11               |  |
| 708.00          | 6.17               | 35.78          | 707.15          | 18.67        | 11.14        | 20.69           | 1.87               | 1.68               | -8.87              |  |
| 798.00          | 7.39               | 34.70          | 796.52          | 27.35        | 17.26        | 31.02           | 1.36               | 1.36               | -1.20              |  |
| 888.00          | 8.70               | 36.88          | 885.63          | 37.55        | 24.64        | 43.29           | 1.49               | 1.46               | 2.42               |  |

# Anadarko Petroleum Corp

## Survey Report

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_BONANZA 1023-5I PAD  
**Well:** BONANZA 1023-511CS  
**Wellbore:** BONANZA 1023-511CS  
**Design:** BONANZA 1023-511CS

**Local Co-ordinate Reference:** Well BONANZA 1023-511CS  
**TVD Reference:** 15' RKB + 5297' GL @ 5312.00ft (xtreme 12)  
**MD Reference:** 15' RKB + 5297' GL @ 5312.00ft (xtreme 12)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** edmp

### Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|
| 978.00              | 10.11           | 39.63       | 974.42              | 49.08      | 33.77      | 57.76                 | 1.64                    | 1.57                   | 3.06                  |
| 1,068.00            | 11.21           | 43.23       | 1,062.86            | 61.54      | 44.80      | 74.26                 | 1.43                    | 1.22                   | 4.00                  |
| 1,158.00            | 12.71           | 46.18       | 1,150.91            | 74.77      | 57.94      | 92.86                 | 1.80                    | 1.67                   | 3.28                  |
| 1,248.00            | 14.42           | 47.61       | 1,238.39            | 89.18      | 73.36      | 113.96                | 1.94                    | 1.90                   | 1.59                  |
| 1,338.00            | 16.18           | 47.71       | 1,325.20            | 105.17     | 90.91      | 137.71                | 1.96                    | 1.96                   | 0.11                  |
| 1,428.00            | 17.94           | 45.69       | 1,411.24            | 123.30     | 110.11     | 164.09                | 2.06                    | 1.96                   | -2.24                 |
| 1,518.00            | 18.47           | 43.40       | 1,496.73            | 143.34     | 129.82     | 192.12                | 0.99                    | 0.59                   | -2.54                 |
| 1,608.00            | 18.73           | 47.97       | 1,582.04            | 163.37     | 150.35     | 220.77                | 1.64                    | 0.29                   | 5.08                  |
| 1,698.00            | 20.49           | 49.12       | 1,666.81            | 183.36     | 173.00     | 250.97                | 2.00                    | 1.96                   | 1.28                  |
| 1,788.00            | 20.75           | 48.59       | 1,751.05            | 204.21     | 196.86     | 282.67                | 0.36                    | 0.29                   | -0.59                 |
| 1,878.00            | 20.58           | 46.48       | 1,835.26            | 225.65     | 220.29     | 314.42                | 0.85                    | -0.19                  | -2.34                 |
| 1,968.00            | 20.58           | 47.27       | 1,919.52            | 247.28     | 243.38     | 346.03                | 0.31                    | 0.00                   | 0.88                  |
| 2,058.00            | 20.84           | 48.41       | 2,003.70            | 268.64     | 266.97     | 377.86                | 0.53                    | 0.29                   | 1.27                  |
| 2,148.00            | 21.19           | 47.27       | 2,087.71            | 290.30     | 290.90     | 410.13                | 0.60                    | 0.39                   | -1.27                 |
| 2,238.00            | 20.66           | 46.04       | 2,171.78            | 312.36     | 314.27     | 442.25                | 0.76                    | -0.59                  | -1.37                 |
| 2,328.00            | 19.17           | 46.92       | 2,256.40            | 333.47     | 336.50     | 472.88                | 1.69                    | -1.66                  | 0.98                  |
| 2,411.00            | 18.55           | 44.90       | 2,334.94            | 352.13     | 355.77     | 499.67                | 1.08                    | -0.75                  | -2.43                 |
| FIRST MWD SURVEY    |                 |             |                     |            |            |                       |                         |                        |                       |
| 2,564.00            | 14.76           | 44.11       | 2,481.49            | 383.38     | 386.53     | 543.40                | 2.48                    | -2.48                  | -0.52                 |
| 2,655.00            | 12.64           | 46.75       | 2,569.90            | 398.52     | 401.85     | 564.91                | 2.43                    | -2.33                  | 2.90                  |
| 2,745.00            | 11.86           | 48.90       | 2,657.85            | 411.36     | 416.00     | 584.01                | 0.98                    | -0.84                  | 2.39                  |
| 2,836.00            | 11.06           | 53.05       | 2,747.03            | 422.77     | 430.04     | 602.08                | 1.28                    | -0.90                  | 4.56                  |
| 2,927.00            | 10.94           | 52.67       | 2,836.36            | 433.25     | 443.88     | 619.40                | 0.15                    | -0.13                  | -0.42                 |
| 3,018.00            | 10.69           | 52.67       | 2,925.74            | 443.60     | 457.45     | 636.43                | 0.27                    | -0.27                  | 0.00                  |
| 3,109.00            | 10.13           | 55.42       | 3,015.25            | 453.26     | 470.75     | 652.80                | 0.82                    | -0.62                  | 3.02                  |
| 3,199.00            | 9.19            | 54.17       | 3,103.97            | 461.96     | 483.10     | 667.82                | 1.07                    | -1.04                  | -1.39                 |
| 3,290.00            | 9.75            | 52.55       | 3,193.73            | 470.90     | 495.11     | 682.74                | 0.68                    | 0.62                   | -1.78                 |
| 3,381.00            | 8.00            | 53.42       | 3,283.64            | 479.36     | 506.31     | 696.74                | 1.93                    | -1.92                  | 0.96                  |
| 3,472.00            | 5.56            | 56.17       | 3,373.99            | 485.59     | 515.06     | 707.43                | 2.70                    | -2.68                  | 3.02                  |
| 3,562.00            | 5.38            | 63.67       | 3,463.58            | 489.89     | 522.46     | 715.83                | 0.82                    | -0.20                  | 8.33                  |
| 3,653.00            | 4.50            | 72.92       | 3,554.25            | 492.83     | 529.70     | 723.20                | 1.30                    | -0.97                  | 10.16                 |
| 3,744.00            | 3.06            | 82.67       | 3,645.05            | 494.19     | 535.52     | 728.48                | 1.73                    | -1.58                  | 10.71                 |
| 3,835.00            | 1.94            | 75.42       | 3,735.96            | 494.89     | 539.42     | 731.87                | 1.28                    | -1.23                  | -7.97                 |
| 3,926.00            | 1.56            | 85.67       | 3,826.92            | 495.37     | 542.15     | 734.23                | 0.54                    | -0.42                  | 11.26                 |
| 4,016.00            | 1.88            | 49.55       | 3,916.88            | 496.42     | 544.49     | 736.69                | 1.23                    | 0.36                   | -40.13                |
| 4,107.00            | 1.63            | 61.05       | 4,007.84            | 498.01     | 546.76     | 739.45                | 0.47                    | -0.27                  | 12.64                 |
| 4,198.00            | 1.31            | 81.92       | 4,098.81            | 498.79     | 548.92     | 741.58                | 0.68                    | -0.35                  | 22.93                 |
| 4,289.00            | 1.44            | 95.17       | 4,189.78            | 498.83     | 551.09     | 743.24                | 0.38                    | 0.14                   | 14.56                 |
| 4,379.00            | 0.75            | 56.67       | 4,279.76            | 499.05     | 552.71     | 744.60                | 1.08                    | -0.77                  | -42.78                |
| 4,470.00            | 1.19            | 21.05       | 4,370.75            | 500.26     | 553.55     | 746.03                | 0.80                    | 0.48                   | -39.14                |
| 4,561.00            | 1.00            | 36.92       | 4,461.74            | 501.78     | 554.36     | 747.64                | 0.39                    | -0.21                  | 17.44                 |
| 4,651.00            | 0.81            | 51.80       | 4,551.72            | 502.80     | 555.33     | 749.05                | 0.33                    | -0.21                  | 16.53                 |
| 4,742.00            | 0.63            | 58.30       | 4,642.72            | 503.46     | 556.27     | 750.18                | 0.22                    | -0.20                  | 7.14                  |

# Anadarko Petroleum Corp

## Survey Report

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_BONANZA 1023-5I PAD  
**Well:** BONANZA 1023-5I1CS  
**Wellbore:** BONANZA 1023-5I1CS  
**Design:** BONANZA 1023-5I1CS

**Local Co-ordinate Reference:** Well BONANZA 1023-5I1CS  
**TVD Reference:** 15' RKB + 5297' GL @ 5312.00ft (xtreme 12)  
**MD Reference:** 15' RKB + 5297' GL @ 5312.00ft (xtreme 12)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** edmp

### Survey

| Measured Depth (ft)     | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Bulld Rate (°/100usft) | Turn Rate (°/100usft) |
|-------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|
| 4,833.00                | 0.25            | 108.17      | 4,733.71            | 503.66     | 556.88     | 750.78                | 0.56                    | -0.42                  | 54.80                 |
| 4,924.00                | 1.00            | 10.30       | 4,824.71            | 504.38     | 557.21     | 751.50                | 1.17                    | 0.82                   | -107.55               |
| 5,015.00                | 0.81            | 24.92       | 4,915.70            | 505.74     | 557.62     | 752.71                | 0.33                    | -0.21                  | 16.07                 |
| 5,105.00                | 0.75            | 39.17       | 5,005.69            | 506.78     | 558.26     | 753.87                | 0.22                    | -0.07                  | 15.83                 |
| 5,196.00                | 0.75            | 51.05       | 5,096.68            | 507.61     | 559.10     | 755.05                | 0.17                    | 0.00                   | 13.05                 |
| 5,287.00                | 0.75            | 74.92       | 5,187.68            | 508.14     | 560.14     | 756.18                | 0.34                    | 0.00                   | 26.23                 |
| 5,378.00                | 0.75            | 98.80       | 5,278.67            | 508.21     | 561.30     | 757.10                | 0.34                    | 0.00                   | 26.24                 |
| 5,469.00                | 0.88            | 109.67      | 5,369.66            | 507.88     | 562.55     | 757.82                | 0.22                    | 0.14                   | 11.95                 |
| 5,559.00                | 1.50            | 120.42      | 5,459.64            | 507.05     | 564.22     | 758.53                | 0.73                    | 0.69                   | 11.94                 |
| 5,650.00                | 0.63            | 142.55      | 5,550.62            | 506.05     | 565.55     | 758.87                | 1.04                    | -0.96                  | 24.32                 |
| 5,741.00                | 0.50            | 116.67      | 5,641.62            | 505.48     | 566.21     | 758.98                | 0.31                    | -0.14                  | -28.44                |
| 5,832.00                | 0.69            | 119.05      | 5,732.61            | 505.03     | 567.04     | 759.32                | 0.21                    | 0.21                   | 2.62                  |
| 5,922.00                | 0.31            | 26.17       | 5,822.61            | 504.99     | 567.62     | 759.73                | 0.86                    | -0.42                  | -103.20               |
| 6,013.00                | 1.50            | 329.30      | 5,913.60            | 506.23     | 567.12     | 760.17                | 1.49                    | 1.31                   | -62.49                |
| 6,104.00                | 2.19            | 341.30      | 6,004.55            | 508.90     | 565.96     | 761.06                | 0.87                    | 0.76                   | 13.19                 |
| 6,194.00                | 2.13            | 346.42      | 6,094.49            | 512.16     | 565.01     | 762.49                | 0.22                    | -0.07                  | 5.69                  |
| 6,285.00                | 1.81            | 346.67      | 6,185.43            | 515.20     | 564.29     | 763.95                | 0.35                    | -0.35                  | 0.27                  |
| 6,376.00                | 1.25            | 342.30      | 6,276.40            | 517.54     | 563.65     | 765.02                | 0.63                    | -0.62                  | -4.80                 |
| 6,467.00                | 1.06            | 339.30      | 6,367.38            | 519.28     | 563.05     | 765.72                | 0.22                    | -0.21                  | -3.30                 |
| 6,558.00                | 0.56            | 341.05      | 6,458.37            | 520.49     | 562.61     | 766.18                | 0.55                    | -0.55                  | 1.92                  |
| 6,649.00                | 0.06            | 204.30      | 6,549.37            | 520.86     | 562.45     | 766.31                | 0.66                    | -0.55                  | -150.28               |
| 6,739.00                | 0.25            | 165.67      | 6,639.37            | 520.63     | 562.48     | 766.18                | 0.23                    | 0.21                   | -42.92                |
| 6,830.00                | 0.50            | 145.92      | 6,730.37            | 520.11     | 562.75     | 766.04                | 0.31                    | 0.27                   | -21.70                |
| 6,921.00                | 0.88            | 147.30      | 6,821.36            | 519.19     | 563.35     | 765.88                | 0.42                    | 0.42                   | 1.52                  |
| 7,012.00                | 1.44            | 160.67      | 6,912.34            | 517.52     | 564.10     | 765.35                | 0.68                    | 0.62                   | 14.69                 |
| 7,102.00                | 0.88            | 142.30      | 7,002.32            | 515.91     | 564.90     | 764.88                | 0.74                    | -0.62                  | -20.41                |
| 7,193.00                | 0.56            | 53.80       | 7,093.32            | 515.62     | 565.69     | 765.28                | 1.13                    | -0.35                  | -97.25                |
| 7,284.00                | 0.44            | 31.80       | 7,184.32            | 516.18     | 566.23     | 766.06                | 0.25                    | -0.13                  | -24.18                |
| 7,375.00                | 0.44            | 32.67       | 7,275.31            | 516.77     | 566.60     | 766.73                | 0.01                    | 0.00                   | 0.96                  |
| 7,465.00                | 0.75            | 14.92       | 7,365.31            | 517.63     | 566.94     | 767.55                | 0.40                    | 0.34                   | -19.72                |
| 7,556.00                | 1.44            | 345.05      | 7,456.29            | 519.31     | 566.80     | 768.56                | 0.96                    | 0.76                   | -32.82                |
| 7,647.00                | 1.56            | 347.17      | 7,547.26            | 521.62     | 566.23     | 769.65                | 0.15                    | 0.13                   | 2.33                  |
| 7,738.00                | 0.69            | 337.92      | 7,638.24            | 523.34     | 565.75     | 770.42                | 0.97                    | -0.96                  | -10.16                |
| 7,828.00                | 0.44            | 143.42      | 7,728.24            | 523.56     | 565.75     | 770.57                | 1.25                    | -0.28                  | 183.89                |
| 7,919.00                | 1.69            | 132.42      | 7,819.22            | 522.38     | 566.95     | 770.69                | 1.39                    | 1.37                   | -12.09                |
| 8,010.00                | 1.63            | 150.17      | 7,910.19            | 520.35     | 568.58     | 770.58                | 0.57                    | -0.07                  | 19.51                 |
| 8,101.00                | 1.50            | 158.30      | 8,001.15            | 518.12     | 569.67     | 769.93                | 0.28                    | -0.14                  | 8.93                  |
| 8,191.00                | 1.94            | 152.80      | 8,091.11            | 515.67     | 570.80     | 769.16                | 0.52                    | 0.49                   | -6.11                 |
| 8,282.00                | 2.06            | 153.80      | 8,182.06            | 512.83     | 572.23     | 768.36                | 0.14                    | 0.13                   | 1.10                  |
| 8,373.00                | 2.44            | 158.42      | 8,272.99            | 509.56     | 573.66     | 767.28                | 0.46                    | 0.42                   | 5.08                  |
| 8,436.00                | 2.55            | 164.08      | 8,335.93            | 506.97     | 574.54     | 766.23                | 0.43                    | 0.17                   | 8.98                  |
| <b>LAST MWD SURVEY</b>  |                 |             |                     |            |            |                       |                         |                        |                       |
| 8,486.00                | 2.55            | 164.08      | 8,385.88            | 504.83     | 575.15     | 765.28                | 0.00                    | 0.00                   | 0.00                  |
| <b>PROJECTION TO TD</b> |                 |             |                     |            |            |                       |                         |                        |                       |

# Anadarko Petroleum Corp

## Survey Report

|                  |                                    |                                     |  |
|------------------|------------------------------------|-------------------------------------|--|
| <b>Company:</b>  | US ROCKIES REGION PLANNING         | <b>Local Co-ordinate Reference:</b> | Well BONANZA 1023-5I1CS                    |
| <b>Project:</b>  | UTAH - UTM (feet), NAD27, Zone 12N | <b>TVD Reference:</b>               | 15' RKB + 5297' GL @ 5312.00ft (xtreme 12) |
| <b>Site:</b>     | UINTAH_BONANZA 1023-5I PAD         | <b>MD Reference:</b>                | 15' RKB + 5297' GL @ 5312.00ft (xtreme 12) |
| <b>Well:</b>     | BONANZA 1023-5I1CS                 | <b>North Reference:</b>             | True                                       |
| <b>Wellbore:</b> | BONANZA 1023-5I1CS                 | <b>Survey Calculation Method:</b>   | Minimum Curvature                          |
| <b>Design:</b>   | BONANZA 1023-5I1CS                 | <b>Database:</b>                    | edmp                                       |

### Survey

| Measured<br>Depth<br>(ft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Vertical<br>Section<br>(ft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
|---------------------------|--------------------|----------------|---------------------------|---------------|---------------|-----------------------------|-------------------------------|------------------------------|-----------------------------|
|---------------------------|--------------------|----------------|---------------------------|---------------|---------------|-----------------------------|-------------------------------|------------------------------|-----------------------------|

### Design Annotations

| Measured<br>Depth<br>(ft) | Vertical<br>Depth<br>(ft) | Local Coordinates |               | Comment          |
|---------------------------|---------------------------|-------------------|---------------|------------------|
|                           |                           | +N/-S<br>(ft)     | +E/-W<br>(ft) |                  |
| 2,411.00                  | 2,334.94                  | 352.13            | 355.77        | FIRST MWD SURVEY |
| 8,436.00                  | 8,335.93                  | 506.97            | 574.54        | LAST MWD SURVEY  |
| 8,486.00                  | 8,385.88                  | 504.83            | 575.15        | PROJECTION TO TD |

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_